Statelessness in Estonia and Latvia

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Abstract

This thesis discusses the post-Soviet situation of statelessness in Latvia and Estonia: the context that it exists in, the trends that can be modeled through time series, its relationship to economic factors and amendments through OLS models, and the past literature surrounding it. The paper uses ARIMA models to enable predictions based on 2004-2020 trends in population proportion. The models predict that despite Latvia having a faster stateless dissolution rate, their initial higher proportion in population. The data examined through visualizations and models include sources from 1991 to 2020.
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Acknowledgements

I would like to thank my advisor Professor Stokes and NU Librarians for the guidance they provided me when undertaking this project. I would like to also thank my friends for helping me focus and explaining comma rules to me, Arielle and Pyrros.
Introduction

Latvia and Estonia both possess unique populations as a side effect of the dissolution of the Soviet Union. These populations are citizens of no country as despite residing in the countries at the time of independence, they and their descendants were not automatically granted citizenship of Latvia and Estonia. Since the forced removal of hundreds of thousands would be a human rights violation, the domestic population of non-citizens has decreased over time due to naturalizations, emigration, death, and legal changes. This population has been granted passports that allow them to return to Latvia and Estonia should they need to leave, and in Estonia, they are granted political participation at the local level. The continued existence of this population has resulted in pressure from the Russian government and international organizations such as the EU onto the Latvian and Estonian government. It has been over 30 years since the Estonia and Latvia became independent, yet the persistence of the stateless population is a reminder of the former Soviet rule.

The intention of this paper is to further explore patterns of the stateless populations in Estonia and Latvia. The visualizations in this paper are meant to examine some of the apparent patterns of the stateless populations of Estonia and Latvia. The models were approached in two different manners. The stateless population was examined using the traditional linear model using economic and citizenship law data and predictions were developed using time series. These models allow us to examine the pre-2020 trends and their subsequent relationship to the future. The stateless population is still evolving and will likely be effected by the war in Ukraine.
Historical Context

The following chapter contains two sections. The first section is an overview on the history of the Baltic region with a focus on Latvia and Estonia. The second section is a table of dates explaining legal changes affecting non-citizens and minority populations in Latvia and Estonia from 1991 to the present.

An Overview on the Region

Since 1200 the Baltic region have usually been ruled or heavily influenced by cultures not their own. Their position between the aspiring German and Russian empires resulted in power transfers and influences that were outside of their control. The transfer of power between ruling empires was done without consultation of the people living in the region. This trend continued through the end of the World War II, as the February 1945 Yalta Conference saw the Allied powers ignore the plight of the Baltic states in an attempt to prevent negotiations from getting too tense.

Prior to 1200, the Baltic States were left alone by neighboring groups like the Kievan Rus, Vikings and Germans. However, around 1200 when the Germans were returning from a Crusade, they decided to invade the Baltic region under the guise of spreading Christianity. The spread of Christianity had limited success as the language that would become modern Latvian comes from the Balto-Slavic branch of the Indo-European language tree\(^1\) and what would become Estonian is from the Finnic branch of Ugric languages.\(^2\) Neither of these languages are from the same branch as Germanic languages. However, from around 1200 to the mid-1500s,

\(^2\) Ibid. 5
Germans had influence on this region. This resulted in a class of Baltic German nobles who would primarily control estates and the local government until post World War I independence. This period also saw the development of serfdom in the region which had not been practiced there before. The local populations had no voting rights and under the local system of serfdom the newly established German Baltic nobles were allowed to buy, sell, and kill peasants without fear of retribution. Formally, German rule lasted from 1227 to 1561.³

Latvia and Estonia were not united into the regions they would become at this time. Instead Estland was the German name for what would be Northern Estonia, Livonia was the name for what is now Southern Estonia and Northern Latvia, Courland (also called Kurland) was the name for Western Latvia, and Latgale was the name for Eastern Latvia. These regions would not be ruled under a single government until the final partitioning of Poland in 1795 when they all fell under Russian rule. In the map⁴ depicting the region under the Russian empire, Latgale is depicted in blue, Courland in orange and Livonia in green. The red line denotes the current Latvian border and shows how Livonia was split between Estonia and Latvia.

³ Ibid. 19
From the mid-1500s to 1710, Livonia and Estland fell under Swedish rule and Latgale and Lithuania fell under Polish rule. Peasants had some access to primary education in Livonia.
and Estland and the Universities of Tartu and Dorpat were established. Sweden was unable to eliminate the practice of serfdom because the ruling German Balts continued to own the majority of the land and refused to allow the practice to end. The Swedish rule has been called by some historians the Happy Era, but it began and ended with pestilence, famine and war. Around this time (1561 to 1795), the Duchy of Courland was able to have some degree of autonomy, but the ruling class here was still German Balts, not native Latvians.

After the Great Northern War, Livonia and Estland transferred to Peter the Great by the Treaty of Nystadt in 1721. This treaty was supported by the German-Balt nobility as it restricted land owning to nobility, reconfirmed serfdom, closed schools established by the Swedes and gave the nobility the ability to pass more oppressive laws. By the end of the eighteenth century, the rest of the Baltics fell under Russian control with the partitioning of Poland; this was the first time the Baltic region had been controlled by a single government. German Baltic nobles continued to control local government and initially preferred Russian rule as the Russian government did not object to serfdom. Serfdom was abolished in Estland and Livonia in 1816 with the Estonian Act of 1816, in Kourland in 1818 by a similar act, and in all of Russia including Latgale in 1861. This was passed in Estonia as the Russian governor was concerned about peasant unrest in Kourland that continued after Napoleon’s defeat in 1812; the alternative presented to the nobles was an agrarian reform and the Estonian act was adopted instead because the freed serfs would not be entitled to live or work on the land they had lived on. The serfs were technically freed, but had nowhere to go and industrial opportunities had not been established; instead the liberation of the serfs enabled noble landholdings to expand.

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6 Ibid. 97
7 Ibid. 98
The falling grain prices of the 1820s, the poor harvests of the 1830s and 1840s, and the subsequent uprisings and Russian military suppressions resulted in the Bill of 1849 which was intended to establish a money rent system and a class of small landholders. The nobles continued to demand *courvee* (labor payments) instead of money rent despite Alexander II’s government attempting to pressure the transition. Under Alexander II, peasants were able to build a sense of nationalism and more openly practice their culture. Certain banks at this time enabled some peasants to become small landowners. However, under Alexander III, a Russification movement began in the 1880s that forced education and administration to occur entirely in Russian and attempted to reduce nationalistic sentiment. This coupled with the increase in Russian policing and censorship led to an exodus of German intelligentsia as most higher education occurred in German and this made functional local government difficult. Although, peasant councils were once again attempted in the 1890s, German Baltics blocked this measure like they did under Swedish rule.

When Russia lost the Russo-Japanese War in 1905, local leaders in the Baltic region launched failed revolutions in hopes that Russian rule would be weak enough for the revolutions to succeed. Reformists and radicals both wanted autonomy and saw this as an opportunity. Initial violence broke out after Russian soldiers fired on protestors in a Bloody Sunday incident. Peasants were able to destroy considerable amounts of German Baltic property before Russian martial law was put into effect; the German Balts then proceeded to increase ties to Berlin. After this the Russian government offered some reforms in that a Duma was formed

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8 Ibid. 99  
9 Ibid. 105  
10 Ibid. 110  
12 Kalnins, *Latvia: A Short History*. 114
as a council, but it lacked any true power. By the eve of World War I, the German Balts were
less than 4 percent of the population in Latvia but owned about 60 percent of the land.
Similarly in Estonia, the native population did not own the majority of the land. The revolutions
were unsuccessful in their objective of transferring power.

Throughout World War I, the Baltic States were the Eastern Front, so there was extensive
infrastructural damage to recover from at the end of the war. The other issue that Estonia and
Latvia faced was that the war in the two countries lasted almost eighteen additional months after
the official armistice. The Allied powers were reluctant to pressure General von der Goltz to
leave with the German troops out of concern that the Bolsheviks would win the Russian
Revolution. Without the security guarantee from the Allies, German troops, Bolshevik troops
and White Russian troops periodically occupied major cities of Latvia and Estonia even after the
official ceasefire. The prolonged period of occupation meant that the Interwar Baltic
independent nations weren’t formally acknowledged and were unable to join the League of
Nations until 1922. The independent Interwar period was the first time they were able to rule
themselves with borders close to the modern borders. The constitutions passed in this period
would later provide the basis for the temporary post-Soviet transitional governments, and have
provided justification for much of the present-day constitutions. At the time they also helped
enlarge the class of land owners by redistributing aristocratic properties above a certain size to
family farmers. The Baltic states also provided universal suffrage for men and women during

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13 Ibid. 112
14 Herbert A. Grant Watson, The Latvian Republic: The Struggle For Freedom (Great Britain: Unwin Brothers Ltd., 1965). 42
15 Kalnins, Latvia: A Short History.118
16 Grant Watson, The Latvian Republic: The Struggle For Freedom.48-87
17 Ibid. 48-87
18 Ibid. 87
the Interwar period. Similar to Interwar Poland, these interwar countries did not have recent experience as independent nations and had significant minority populations to complicate administration which is part of the reason the League of Nations required them to accept the obligations of the minority treaties. Concerned about their location between Germany and Soviet Russia, Estonia and Latvia made a mutual defense alliance in November 1923 that Finland, Poland, and Lithuania declined to join.

The Soviets invaded first during World War II and the Baltic states were not protected by their earlier stated neutrality. The start dates of the transitional Soviet puppet governments were used to mark the end of the independent interwar nations. Nazi Germany later invaded, hoping to use the Baltic states as a beachhead for its aspirations to eventually enter Russia. The Nazi state also made claims regarding concern for the wellbeing of the German minority. Initially welcomed as liberators from the Soviets, the Nazis soon made clear that they would not allow the independent nations to reform and embarked on a campaign of Germanization. The Baltics were devastated as they became the Eastern Front once more. Just as before, the war lasted after the official armistice, this time as guerilla Latvians and Estonians attacked Soviets with rural support. The provisional post World War II governments lasted mere days before the Soviet sanctioned governments were reinstated.

Although standards of living were not as bad in the Baltics as other parts of the Soviet Union, the secret police and the accompanying mass deportations arrived rapidly in the wake of Soviet power. Because the Soviet government deported ethnic Latvians and Estonians while

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19 Ibid. 87  
20 Kalnins, Latvia: A Short History. 129  
21 Ibid. 146  
22 Ibid. 156  
23 Ibid. 152
encouraging ethnic Russians to resettle in these two states, the deportations diluted the ethnic composition of the Baltics. The new ruling government was composed of Latvian and Estonian communists who left to go to the Soviet Union during the Interwar Period and survived the purges alongside Russian communists who often did not speak the necessary languages.\textsuperscript{24} Just as the Russian empire did the late nineteenth century, the Soviet state launched a Russification campaign. By the 1980s, Moscow had changed enough that nationalist sentiment was able to flourish again, particularly through songs that were permitted in the vernacular. In 1989, many important things happened quickly. Elections occurred, and, with the support of Russians in the Baltics, votes of independence succeeded. Also in 1989, the human chain connecting Tallinn to Riga to Vilnius brought international attention to the peaceful campaign.\textsuperscript{25} In December, the Soviet government acknowledged that it had not had legitimate claim to take the Baltic states.\textsuperscript{26}

New leadership used an amalgamation of the interwar and Soviet constitutions to justify the transition government.\textsuperscript{27} The vote for independence involved all Soviet citizen residents, but the later elections for the first legislatures was restricted only to those granted citizenship, disenfranchising those who arrived during Soviet rule.\textsuperscript{28} In 1991, all 3 Baltic states joined the UN and the Conference on Security and Cooperation in Europe (later renamed the Organization on Security and Cooperation in Europe) in the new elections. In 1992, the Baltic states created the Council of Baltic States and began to receive aid from the European Community (now known as the European Union) before joining as associate members in 1995. Russian troops did not leave Latvia and Estonia until 1995, citing concerns about the well-being of the Russian

\textsuperscript{24} Ibid. 157
\textsuperscript{25} Ibid. 178
\textsuperscript{26} Ibid. 180
\textsuperscript{27} Ibid. 188
minority; this line of reasoning was also used in negotiations in the late 1990s and 2000s. The 1998 Charter of Partnership enabled a path for the Baltic states to join NATO, EU and WTO, but did result in more international pressure to alter laws and regulations. Estonia, Latvia, and Lithuania gained approval in 2002 and formally joined the EU and NATO in 2004.

Recent Citizenship History

Purple events indicate some of the more important legal changes.

<table>
<thead>
<tr>
<th>Date</th>
<th>Country</th>
<th>Event</th>
<th>Regulations</th>
</tr>
</thead>
<tbody>
<tr>
<td>September</td>
<td>Lithuania, Latvia and Estonia</td>
<td>join the UN.</td>
<td></td>
</tr>
<tr>
<td>1991</td>
<td>Latvia</td>
<td>Citizenship Restoration Resolution is passed</td>
<td>Restored Latvian citizenship to those who held it before 17 June 1940 and their descendants</td>
</tr>
<tr>
<td>October</td>
<td>Estonia</td>
<td>Citizenship Law of 1938 re-established</td>
<td>Granted Estonian citizenship to those who held it before 16 June 1940 and their descendants</td>
</tr>
<tr>
<td>1992</td>
<td></td>
<td></td>
<td>Naturalization requirements:</td>
</tr>
</tbody>
</table>

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32 Report on Citizenship Law: Latvia
<table>
<thead>
<tr>
<th>Date</th>
<th>Location</th>
<th>Law/Movement</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>June 1992</td>
<td>Estonia</td>
<td>Constitution</td>
<td>All residents regardless of citizenship granted:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Access to courts</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Limited political participation</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Freedom of expression</td>
</tr>
<tr>
<td>May 1993</td>
<td>Estonia</td>
<td>Local Election Law</td>
<td>Those who lived in Estonia for 5 years can participate in local elections (voting and candidacy)</td>
</tr>
<tr>
<td>June 1993</td>
<td>Estonia</td>
<td>Aliens Act</td>
<td>Required aliens to apply for residency and work permits within 5 years</td>
</tr>
<tr>
<td>July 1993</td>
<td>Estonia</td>
<td>Revised Aliens Act</td>
<td>• Classified all non-citizens as aliens</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Required aliens to apply for residency and work permits within 2 years</td>
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<tr>
<td>Date</td>
<td>Country</td>
<td>Event</td>
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<td>-------------------------------------------------------------------------</td>
</tr>
<tr>
<td>July 1994</td>
<td>Latvia</td>
<td>Citizenship Law is passed</td>
<td>Created ‘window policy’ where applicants grouped by age and birthplace</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1996 considered 16-20 year olds born in Latvia followed by 1997 with those less than 25 year old and born in Latvia</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Requirements:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• 5 years residence no later than 4 May 1990</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Basic Latvian</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Latvian history and civic exam</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Loyalty oath</td>
</tr>
<tr>
<td>August 1994</td>
<td>Russia</td>
<td>Russian troops leave Latvia and Estonia.</td>
<td></td>
</tr>
<tr>
<td>October 1994</td>
<td>Estonia</td>
<td>First Alien Passports issued</td>
<td>Later amendments allowed passports and permanent resident permits to those who had legal income and</td>
</tr>
<tr>
<td>January 1995</td>
<td>Estonia</td>
<td>Citizenship Law amended</td>
<td>• Residence permit from at least 5 years prior to application</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• 80% on Estonian civics exam</td>
</tr>
<tr>
<td>Date</td>
<td>Country</td>
<td>Event</td>
<td>Details</td>
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<tr>
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<td>----------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>February 1995</td>
<td>Estonia</td>
<td><strong>Language Law passed</strong></td>
<td>• Minority languages allowed to be used in administration in areas of concentration</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Russian now treated as foreign language</td>
</tr>
<tr>
<td>April 1995</td>
<td>Latvia</td>
<td><strong>Law on the Status of Former Soviet Citizens Who are Not Citizens of Latvia or Any Other State</strong></td>
<td>Granted permanent residents:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Freedom of movement</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Protection against deportation</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Interpreters in court</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Choice of language of communications with government and its institutions</td>
</tr>
<tr>
<td>December 1995</td>
<td></td>
<td><strong>The Baltic States become associate members of the EU.</strong></td>
<td></td>
</tr>
<tr>
<td>February 1998</td>
<td></td>
<td><strong>The Baltic States begin accession negotiations with the EU.</strong></td>
<td></td>
</tr>
<tr>
<td>January-May 1998</td>
<td>Latvia</td>
<td><strong>Series of laws on non-citizens</strong></td>
<td>• Removed work restrictions for non-citizens</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Allowed non-citizens to register with the State Employment service</td>
</tr>
<tr>
<td>December 1998</td>
<td>Estonia</td>
<td><strong>Citizenship Law amended</strong></td>
<td>Children born in Estonia after 26 February 1992 without citizenship to any state with parents who have lived in Estonia for at</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>Date</th>
<th>Country</th>
<th>Event Description</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>April 2000</td>
<td>Estonia</td>
<td>Language Law amended</td>
<td>Altered to meet international standards of private and public sectors’ use of language</td>
</tr>
<tr>
<td>June 2000</td>
<td>Estonia</td>
<td>Changes to naturalization process</td>
<td>Instead of multiple language exams, they allow the language exam to be the naturalization exam, state exam or school proficiency exam</td>
</tr>
</tbody>
</table>
| February 2001 | Latvia | National Programme for the Integration of Society is adopted                        | Simplified naturalization process:  
  - Latvian language exam in high school counts for language test  
  - Naturalization fee is reduced by 1/3 |
<p>| November 2001 | Estonia | Amendments to Estonian Parliamentary and Local Elections Law                       | Abolished the language requirement (candidacy and voting)               |
| January 2002 | Estonia | Changes to naturalization process                                                  | High school civics exams count towards naturalization requirements     |
| May 2002   | Latvia  | Election Law provision abolished                                                  | No longer require national or local political candidates to be fluent in Latvian |</p>
<table>
<thead>
<tr>
<th>Date</th>
<th>Country</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>January –</td>
<td></td>
<td></td>
</tr>
<tr>
<td>February</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2004</td>
<td>Latvia</td>
<td>Changes to naturalization process Successful applicants will have language tuition</td>
</tr>
<tr>
<td></td>
<td></td>
<td>costs reimbursed</td>
</tr>
<tr>
<td>March 2004</td>
<td></td>
<td>The Baltic States become members of NATO.</td>
</tr>
<tr>
<td>May 2004</td>
<td></td>
<td>The Baltic States become full members of the EU.</td>
</tr>
<tr>
<td>2004</td>
<td>Latvia</td>
<td>Education Law</td>
</tr>
<tr>
<td>(passed in</td>
<td></td>
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<tr>
<td>1998, but</td>
<td></td>
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<tr>
<td>didn’t go</td>
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</tr>
<tr>
<td>into effect</td>
<td></td>
<td></td>
</tr>
<tr>
<td>until 2004)</td>
<td></td>
<td>• State supported high schools must have Latvian be main language of instruction</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Minority languages still allowed to be primary language in 1st-9th grade</td>
</tr>
<tr>
<td>June 2008</td>
<td>Russia</td>
<td>Travel Visas</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Grants visa-free travel to those with non-citizen passports (Latvia) and aliens’</td>
</tr>
<tr>
<td></td>
<td></td>
<td>passports (Estonia)</td>
</tr>
<tr>
<td>September</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2013</td>
<td>Latvia</td>
<td>Amendments to Citizenship Law</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Provided at least one stateless parent requests it, a child can be granted</td>
</tr>
<tr>
<td></td>
<td></td>
<td>citizenship at birth</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Increased number of cases of dual citizenship allowed – including individuals</td>
</tr>
<tr>
<td></td>
<td></td>
<td>and descendants of those who obtained other citizenship after fleeing during</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Soviet rule</td>
</tr>
<tr>
<td>Year</td>
<td>Country</td>
<td>Event</td>
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<td>--------</td>
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<td>----------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| 2014   | Russia       | Russia takes control of Crimea.                                       | Exempts individuals over 65 from the written part of the language exam  

- Various degrees of disabilities allow exemption from the different exams |
| 2015   | Latvia       | Petropavlovskis v. Latvia                                             | It is confirmed to be legal to deny citizenship to those disloyal to Latvia. It also served confirm right to refuse citizenship to ex- and current foreign military. |
| January 2016 | Estonia | Amendments to Citizenship Law goes into effect                        | - Children born to stateless parents in Estonia are automatically granted citizenship, though parents are allowed to reject this citizenship on behalf of their child within a year  

- Stateless resident children under 15 with parents who’ve resided at least 5 years will automatically be given Estonian citizenship, though |
parents are allowed to reject citizenship within a year
- Children born in Estonia may have dual citizenship until age 18 when they then have 3 years to decide which citizenship they want to have

| January 2020 | Latvia | Citizenship Law amendments | Ends the practice of granting non-citizenship to newborns, instead all newborns born in Latvia are granted citizenship |

2022 | Russia invades Ukraine.

**Literature Review**

The literature on Estonia and Latvia regarding their non-citizen population tends to focus on language differences, ethnic differences, and nationalism within each of the respective countries. It is common to refer to the ethnic group that shares the name of the state as the titular group in these readings. For example, Estonians are the titulars of Estonia and Latvians are the titulars of Latvia. When titular is used as an adjective, it refers to when an adjective matches the state, such as Estonian being the titular language of Estonia.

**Issues Regarding Language: Laitin**
Although David Laitin initially posed questions regarding nation-state relationship degree and viability of peace between different nationalities in Ukraine, Kazakhstan, Estonia and Latvia, much of his book, *Identity in Formation: The Russian-Speaking Populations in the Near Abroad*, is actually about the importance of language and the connotations language can possess in these environments. Laitin is a professor of political science with a focus on language, religion and their role connecting nations and states; he published this book in 1998 when he still taught at University of Chicago before teaching at Stanford University. This was written between two major waves of legal changes to Baltic citizenship law. Language is used as a method of studying integration and Laitin offers the tipping game as a theoretical model for this. “Much of the ‘work’ of identity choice, in consequence, precedes the tipping dynamic. In times of crisis, then, people may be playing more than one game at a time. Nonetheless, the tipping model neatly encapsulates people’s strategic dilemmas once the game has begun. In this sense, the time game is but a partial rendition of the overall cultural dynamic.”^34^ The tipping game is used to model the utility of a Russian speaker learning the titular language and vice versa. It is not a monotonic model, but instead features an increase in utility of bilingualism when overall bilingualism proportion of the population is low because this small group of people now have the position of negotiators and translators between groups. The so-called tipping point of the tipping model is when Russophones have identical utility for monolingualism and bilingualism. This precise point is unknown because the model is theoretical. Past the tipping point when a very high percentage of Russophones are bilingual there is diminishing marginal returns on adopting bilingualism, but it is still considered better than monolingualism. The utility is based on a

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combination of expected economic concerns, in-group scorn, and out-group acceptance.\textsuperscript{35} Laitin found that the economic returns for Russians speaking titular languages were positive in Estonia and negative in Latvia when controlling for demographic factors but not the other components of utility; this opposite relation reminds us that we cannot neglect the other two components of utility.\textsuperscript{36} For example, the out-group acceptance of assimilation and learning titular languages is higher in Latvia than Estonia.\textsuperscript{37} This general theoretical model is the basis of much of \textit{Identity in Formation: the Russian-Speaking Population in the Near Abroad}.

It should be noted that Laitin’s concept of immigration and assimilation relies on economic motivations and not cultural or social motivations as the primary assumptions.\textsuperscript{38} But outside of economics and language there has been noticeable cultural integration. “… there is abundant evidence that the Russians in the titular republics are taking on cultural characteristics once thought to be distinctive of the titulars. Young Russians in Latvia have started wearing the silver braided ring that Latvians wear as a national symbol.”\textsuperscript{39} These younger generations publicly claiming their countries is partially accounted for by the idea of out-group acceptance. However, we do not have information on whether this is performative or genuine.

There have been suggestions that although Russian has been deliberately de-emphasized in the Baltic states, this is the exception not the rule; instead, Russian as a second language for titulars is primarily economically and practically motivated.\textsuperscript{40} Titular nationals had a greater incentive to maintain bilingualism under Soviet rule due to language regulations regarding bureaucratic and administrative tasks. However, in Laitin’s mid 1990s survey, Russians claim to

\textsuperscript{35} Ibid. 54-56
\textsuperscript{36} Ibid. 254
\textsuperscript{37} Ibid. 256
\textsuperscript{38} Ibid. 28
\textsuperscript{39} Ibid. 159
\textsuperscript{40} Ibid. 44
be more accommodating of the titular language than titulars report to be willing to accommodate Russian language.\textsuperscript{41} This is possibly a result of the Baltic state stance that Soviet control was an unlawful occupation. It likely impacts the willingness of Baltic states to merge cultures with Russians and other minorities as well as the amount of effort expected with integration.

Another phenomenon Laitin studied was a matched-guise test that was conducted on hundreds of high school students attending titular and Russian speaking schools that recorded opinions on friendship and respect after listening to titular and Russian speakers read a passage about Euclidean geometry in Russian and the titular language. “The matched-guise test, developed by Wallace Lambert, was created to examine interethnic or intercultural group attitudes by measuring how people form perceptions of others after hearing only their speech.”\textsuperscript{42} In Latvia and Estonia, Russian speakers lost respect for Russian speakers speaking titular languages and generally thought Russian speakers speaking Russian had better jobs compared to Russians speaking titular languages implying that assimilation would not be rewarded by their own group.\textsuperscript{43} In both titular and non-titular groups, more respect was given to those who spoke the language of the audience and authentic voices tend to be ranked higher; this is viewed to be part of the primordial principle.\textsuperscript{44} This reflects more of the difficulty of assimilation as most groups have less respect and trust for those with noticeable accents. Given the tie of language to citizenship acquisition, the perceived suspicion of speaking a second language needs to be accounted for when considering bilingualism and by extension citizenship, in Estonia and Latvia.

There was a variety of circumstances regarding Russian emigration from the near-abroad. Even Russians in Estonia who wanted to leave, could not easily do so because some co-ops had a

\textsuperscript{41} Ibid. 77
\textsuperscript{42} Ibid. 217
\textsuperscript{43} Ibid. 234-238
\textsuperscript{44} Ibid. 239
requirement that sales be to Estonian citizens and Estonian citizens were hesitant to buy property in predominantly Russian neighborhoods. Areas that were easier for Russians to leave from in Estonia were the regions that Russians were least interested in leaving. The idea of ethnic violence and tension leading to emigration is difficult to determine given that most Estonian reports have deliberate non-ethnic spins and that organized crime, who were prominent in the mid-1990s, meant some potentially ethnically motivated crime went unreported. Similarly, it is common for international models to only account for inter-ethnic violence and not intra-ethnic violence. Although we might have concern that this could affect models, most discard these concerns as increases in unreported crimes in not uncommon in times of political transition and economic fear regardless of the demographic makeup of a region. Related to the desire to emigrate is the survey Laitin constructed that measured openness to assimilation. The $R^2$ scores of all the social economic status impact on individual assimilation index scores were very low and not respectable, with the highest score belonging to the Ukraine with only 38% of variation in assimilation scores being explained by these demographic aspects. This means that most assimilation opinions are not explained by social background conditions, but interestingly the most significant regressor that they found was city of residence. City of residence may reflect certain cultural differences or may be a further reflection of the earlier notice that some people feel greater loyalty to a city than the country. It needs to be noted that Laitin chose to not include numeric emigration figures or feasibility in his tipping game of bilingualism nor of assimilation. Desire to commit an act such as naturalizing and emigrating does not necessarily

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45 Ibid. 168  
46 Ibid. 174  
47 Ibid. 183  
48 Ibid. 340  
49 Ibid. 200-206  
50 Ibid. 260
indicate that it is even feasible for an individual to pay the necessary expenses to do so.

Nonetheless, Laitin provides an interesting perspective regarding the desirability of a language and languages’ ties to citizenship and living location.

**Issues Regarding Language and Identity: Kulu, Tammaru**

Rather than study citizenship, Hill Kulu and Tiit Tammaru studied Estonian language skills’ relationship with social integration. At the time of this publication, Kulu was a research scientist at the Max Planck Institute for Demographic Research and Tammaru was a senior research fellow of University of Tartu’s Geography Institute. They studied non-titulars’ ability to speak Estonian because during Soviet times this was a division between titulaturs and immigrants, non-titulars attitudes about learning Estonian has been central to integration discussions, Estonian was important for working careers and language is easier to study compared to the concept of integration.\(^{51}\) The article compares the demographic and sociological views regarding immigration and integration, so rather than being strictly about language, it is a proxy for identity. The demographic view divides people based on classifications given to people at birth and believes that third-plus generation of immigrants can participate in society, but earlier generations cannot.\(^ {52}\) This is relevant because most minorities and non-citizens had not been in Estonia for three generations, so this theory believes that most would be unable to join Estonia’s society. The sociological view focuses on short term experiences and individual choices and believes that changing values decreases ethnic polarizations and changing social and economic situations will change identities.\(^ {53}\) Their models noticed that gender, age at immigration, working in the service industry, and region were statistically significant for

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\(^{52}\) Ibid. 384

\(^{53}\) Ibid. 385
immigrants born outside Estonia. The occupational sector had 3 dummy variables and service industry was significant; however, it should be noted that many service sector careers in Estonia require employees to be at certain language levels and have testing procedures. Although Kulu and Tammaru note that immigrant women tend to use Estonian as a home language more than immigrant men, they do not mention if there is significant correlation between gender and service industry. If the service industry has a gender bias, then it would not be surprising for immigrant women to use Estonian at home to improve career opportunities and the variables might be endogenous and the model questionable. The children immigrants using Estonian more at home is not surprising as children tend to have an easier time learning languages. Nor is it surprising that the northeast region had lower rates of Estonian language home use because this is where many non-Russians live, so they need Estonian less in their day-to-day life.

**Issues Regarding Ethnicity: Aasland**

Aadne Aasland has studied social exclusion in terms of ethnicity and citizenship in Estonia and Latvia. Aasland is a sociologist who organizes and analyzes large-scale survey with his main research being welfare and migration. Although he has worked on many countries, Russia and the Baltic states have been his focus for a while. The article examining the impact of ethnicity was published first and was a joint effort with Tone Fløtten. It was published 2001 when the Baltic states were expressing interest in joining the European Union and legal changes to citizenship were occurring or being debated. This study used the popular 1999 Norbalt study data, which was used by many researchers on this region. Fløtten is another Norwegian sociologist who specializes in welfare research and social policy. Due to the association between ethnicity and citizenship, social exclusion of ethnicity is important to examine. In most studies

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54 Ibid. 393-394
regarding social exclusion, there are inconsistencies and long-standing debates regarding what qualifies as social exclusion and how to account for generational shifts in behavior. Aasland had already concluded in a prior study that ethnic affiliation had little impact on poverty and there were not large differences in material living conditions.\textsuperscript{55} This is relevant for my own research because without this knowledge there might be concerns that people were leaving because there was significant economic stratification by ethnicity. If a group is not able to obtain a similar living standard due to ethnicity, they may be incentivized to leave the country because ethnicity is often viewed as an immutable trait. Aasland and Fløtten did note that by most demographic measures titular and non-titular are comparable, however non-titular ethnicities tend to be overrepresented in industrial sectors of the economy due to the Soviet Union moving the populations there for this purpose; there were also uneven geographic concentrations of non-titular ethnicities that impact their ability to integrate into the collective country’s society.\textsuperscript{56}

The four main metrics of social integration and exclusion involve the labour market, political activity, social activity, and citizenship rights. One of the models Fløtten and Aasland created examined the labour market and its relationship with ethnicity. Although causation could not be concluded, they were able to conclude that the Slavic non-titular population was less integrated into the labour markets of Estonia and Latvia, but it should be noted that after 1991, both countries have made a concentrated effort to shift from an industrial economy to a service-based economy.\textsuperscript{57} As many service jobs have titular language requirements, it is not unexpected that minorities who are less familiar with the necessary languages have a more difficult time entering the service industry. In terms of political involvement, it should be noted that although

\textsuperscript{55} Aadne Aasland and Tone Flotten, “Ethnicity and Social Exclusion in Estonia and Latvia,” \textit{Europe-Asia Studies} 53, no. 7 (November 2001): 1023

\textsuperscript{56} Ibid. 1024-1025

\textsuperscript{57} Ibid. 1032-1035
ethnicity was statistically significant, so was education, and education had a much larger impact on involvement in politics.\textsuperscript{58} This is part of the reason why we cared about the similarities in demographics earlier, as titular and non-titular groups actually have education distributions meaning that intra-ethnic differences will have a greater impact on getting involved in civics than inter-ethnic differences. Importantly, Aasland and Fløtten concluded that ethnicity does not have a statistically significant impact on social exclusion.\textsuperscript{59} Overall, Aasland and Fløtten’s correlation analysis between different dimensions of social exclusion found that there was not a singular phenomenon that was social exclusion in Estonia and Latvia, and in only 1\% of respondents were people excluded in all 3 dimensions of social, civil, and economic.\textsuperscript{60} The lack of singular phenomenon is indicative of the need for a multi-faceted approach to reduce exclusion.

Less than a year later, Aasland published another article that discussed citizenship status and social exclusion in Estonia and Latvia. This was meant to see if citizenship affected participation in parts of life not directly related to citizenship. Non-citizens are more commonly found in cities and, even in 2001, still made up a substantial portion of the population of the capital; as cities tend to have better living conditions, this needs to be noted. However, in terms of other demographic markers, non-citizens are very similar to citizens. Once again, Aasland examined exclusion from the labor market, social life and civic life. In Estonia, but not Latvia, Aasland concluded that non-citizens had a higher risk of exclusion from the labour market, but fear of job loss is more common in Latvia.\textsuperscript{61} Poverty is an economic concern and the odds ratio for poverty has citizenship as a statistically significant factor in Estonia, but not Latvia; however

\textsuperscript{58} Ibid. 1036-1038
\textsuperscript{59} Ibid. 1039
\textsuperscript{60} Ibid. 1043
it should be noted that education and age are statistically significant in both countries for the odds ratio and have much larger and more relevant ratios than poverty ratios. In terms of civil life outside of elections, non-citizens can participate in political organizations. As noted earlier, non-citizens in Estonia cannot vote in national elections and in Latvia, they cannot vote at all. Citizens are more likely to join organizations, such as leisure and sports, but “trade union member is equally common among citizens and non-citizens.” However, by Aasland’s definition of the social life, “citizenship status does not have a statistically significant impact on the risk of social isolation” which is important as social networks were important in transition periods where government support would not be easily accessible. When Aasland analyzed social exclusion simultaneously among the multiple dimensions of economic, social, and civic, they found that Estonia saw non-citizens possess a statistically significant higher risk of exclusion, but Latvia did not see a statistically significant difference between citizens and non-citizens; however, in both Estonia and Latvia education level was the most important factor in explaining risk of social exclusion. This is indicative of Latvian’s non-citizens being more integrated into Latvian society than Estonian non-citizens in Estonian society, despite Latvian non-citizens having less political rights.

Issues Regarding: Diasporas and Nationality: Laitin

Laitin’s examination of the language used to refer to minority groups revealed the relevance of primary language use in denoting groups within nations and countries. Laitin only examined Russian language articles, but he noted 711 coded terms in Estonia alone. Laitin

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62 Ibid.: 70-71
63 Ibid.: 67
64 Ibid.: 68-69
65 Ibid.: 73-74
66 Laitin, Identity in Formation: The Russian-Speaking Populations in the Near Abroad.268
broke down the coded words into thirteen categories: Russian-speaking population, negations, Slavs, members of the Russian state, colonists or occupiers, compatriots, Soviets, migrants, residents, minorities, Cossacks, epithets, and mixed categories. All these categories can have different connotations depending on audience and speaker, and some that started out as slurs have been at least partially reclaimed by the groups. An example of audience and speaker impact is with the use of one of the most common categories - “Russian-speaking population”; these terms tend to be used by ethnic Russians themselves, but while Russians not in Russia view the term positively, those from Russia view it as an insult. However, the Russian government uses this category of coded identity to claim some interest in the Baltic states, often as an elder brother status, without asking if this population is interested in being claimed in this way. Part of the reason that this category is more widely used is because it allowed the inclusion of other ethnic groups such as Ukrainians and Belarusians that arrived in the Baltic states during Soviet rule as most of them spoke Russian; it also allows unification of a conglomerate of identities and creates an identity for those who may not have familial roots in a specific location. In general, these coded identities do not necessarily create a distinct group, but they can be used in such a way.

Another examination about nationalism and territory was completed by Pål Kolstø. Kolstø is a University of Oslo professor of Russian and post-Soviet studies with much of his research focused on nationalism as examined through the lens of politics and cultural history. “Territorialising Diasporas: The Case of Russians in the Former Soviet Republics.” was published in 1999 allowing the analysis of data that was collected in the mid-1990s. Kolstø

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67 Ibid. 265-268
68 Ibid. 270
69 Ibid. 308
distinguishes two types of territorial attachment: cultural and political; allowing people to be attached to more than one place simultaneously. The Russian state views Russian communities in neighboring states as ‘extra-territorial’, but the Russian speaking population does not necessarily consent to this viewpoint. Kolstø’s analysis relies on Soviet census data which had nationality as self-reported, but there were differing views as to what counted as Russian. This is partially due to mixed marriages and partially due to linguistic issues where there are two different ways of referring to a Russian person in Russian: one refers to a person who is an ethnic Russian, but the other refers to someone who lives within the political territory controlled by Russia. As such, nationality in any Soviet census was restricted to singular answers about ethnicity, so did not reflect people who belonged to multiple groups or felt like they belonged to no group. In the Soviet governmental structure, units were “named after and supposed to function as homelands for one and occasionally two ethnic groups. . . status of the titular group was reflected only in the area of language policy and even there to a very moderate degree.” However, RSFSR referred to the Russian state, not the ethnicity, leaving ethnic Russians as one of the few groups without a formal government. This resulted in ethnic Russians often viewing themselves as identifying with the whole Soviet Union and enjoying extraterritorial status. Laitin noted that most Estonian Russians had “no village, no neighborhood, no housing bloc in Russia, that represents their ‘real’ home”. Regardless of issues describing Russian-ness, the Russian population that was in the Baltic states after the Soviet collapse is considered a ‘beached diaspora’ because the state boundaries moved, not the people.

71 Laitin, Identity in Formation: The Russian-Speaking Populations in the Near Abroad.
72 Kolsto, “Territorialising Diasporas: The Case of Russians in the Former Soviet Republics.”
73 Laitin, Identity in Formation: The Russian-Speaking Populations in the Near Abroad.
74 Kolsto, “Territorialising Diasporas: The Case of Russians in the Former Soviet Republics.”
This beached diaspora then had troubles in forming their own identity and trying to figure out who they were, as the Soviet Union was no more and they lacked emotional ties to Russia and ethnic ties to the Baltics. “Even so, those Russians and other Russophones in the near abroad who try to organize their co-ethnics for joint cultural activities often feel that the financial support they receive from the Russian state leaves much to be desired.” 75 Although financial support from abroad might be useful, it is often insufficient, or the Russians abroad would prefer to identify as local. There is also the issue where many people identify with a city or community rather than a country itself, making the modeling of general country identity difficult. 76 There is also a difference between self-perception and identity that is accepted by the local population. Identity has been complicated by factors in the Baltic states due to the history of borders and migrations.

Issues Regarding Nationalism: Budryte

Dovile Budryte is presently a political science professor of International Studies at Georgia Gwinnett College. Most of their research is on gender studies, minority rights, democratization, nationalism, and the politics of memory and trauma in Eastern Europe. This book was published in 2005 after the Baltic states joined the European Union in 2004 and so after a wave of changes in citizenship law. It was intended to examine the structure of nationalism in the Baltic states and how it could be an issue in unity.

Estonia

Estonia struggled to maintain a political community from 1993 to 2003 due to different groups within the country maintaining different historical memories about Soviet population policies. This is furthered by the relative autonomy that Estonia grants the northeastern

75 Ibid.: 625
76 Ibid.: 627
provinces. However, mainstream parties without strict ethnic ties are able to attract sufficient Russian speaking non-citizens, allowing there to be some level of interethnic cooperation, even if it is only for convenience.\textsuperscript{77} External factors also affect Estonia’s political environment as Russia tried to exert pressure in the name of ethnic Russians still living in Estonia and the European Union attempted to make Estonian laws and rights conform to their ideals.\textsuperscript{78} Both of these external Russian and Western pressures resulted in an increase in nationalist sentiment as groups viewed changing laws or social expectations as a sign of weakness. Nationalism has appeared as a form of resistance to international and external powers.

\textit{Latvia}

Latvia has seen even moderate politicians call for the removal of Soviet era immigrants in the mid-1990s. The Latvian government allowed the conditional pursuit of citizenship, but also encouraged repatriation and emigration to third countries though they failed to provide economic support to help with emigration.\textsuperscript{79} Although there were public statements saying that emigration would not be forced, there still existed residual fears that this would change in the 1990s and early 2000s. However, Latvia was forced to listen with European Union demands with fewer compromises because they were not offered a fast-tracked membership like Estonia.\textsuperscript{80} Despite nationalistic sentiment, this was used to justify changes to citizenship law and an ending of the age bracket system, which had previously permitted only individuals within a set age bracket to apply for citizenship, even if they met all other requirements. The age bracket system was largely criticized as an intentional bureaucratic slow-down to citizenship to incentivize emigration. The external pressures of the EU and Russia politicized language laws and

\textsuperscript{77} Budryte, \textit{Taming Nationalism? Political Community Building in the Post-Soviet Baltic States}. 91
\textsuperscript{78} Ibid.
\textsuperscript{79} Budryte, \textit{Taming Nationalism? Political Community Building in the Post-Soviet Baltic States}. 110
\textsuperscript{80} Ibid. 116
citizenship laws. Nationalists tried to regulate languages of private businesses and external forces encouraged Russian to be adopted as a second state language, but Latvia continued to recognize only Latvian as its official state language. Unlike Estonia which saw political parties not ethnically divided, Latvia saw this divide from the start, which then expanded. The political divide between titular and non-titular Latvians deepened after 1999 shortly after the age bracket system was abolished.\textsuperscript{81} Despite these controversies, behavioral studies suggest a gradual acceptance of Latvian policy.\textsuperscript{82}

**Final Thoughts on Past Literature**

Most of the literature focuses on language, potential issues in cultural and ethnic differences, and the implications of nationalism. Overall, in both Latvia and Estonia, the non-citizen populations have had periods of comparable demographics to the citizen populations. Concerns regarding inter-ethnic violence seem to be unfounded and there are indications that cultural assimilation efforts have been successful on some dimensions and regions. However, there is concern by some authors that this assimilation is on a city or region identity rather than country identity. Economic assimilation has been possible through removal of prior language requirements as the Baltic economies shift to be more service orientated and younger generations have been increasingly able to learn titular languages and English. It seems that barriers between groups have reduced as more minority populations have assimilated.

\textsuperscript{81} Ibid. 127
\textsuperscript{82} Ibid. 125
**Data Sources**

The data came from a variety of sources and thus had to be reformatted, but the attributes of the sources should be noted and discussed.

The pre 1991 data was collected from Soviet Union Censuses of Latvia and summaries of similar census for Estonia and Lithuania. This data did not explicitly include citizenship because Soviet citizenship did not imply citizenship to the countries that would reform after the Soviet collapse. Instead this data allows us to more clearly see the changing ethnic composition of the countries. As ethnicity generally gets passed down families and does not typically change over the course of one’s life. This allows a proxy for what proportion of the population was expected to be granted citizenship after the mid-1990s.

There are limitations to the Soviet data. These early censuses do not track ethnic group specific birth and death rates that would enable better approximations of population counts and proportions between censuses. Also, ethnicity was not tracked specifically by individual, but instead the self-reported and individuals were limited to identifying with a single ethnicity. As with many surveys, this means people could lie or if they were multi-ethnic they were forced to selectively identify. As it was known that Russians had an advantage compared to other ethnicities, it would not be unexpected if the Russian ethnicity was overrepresented in Soviet Era census collection.

For post-Soviet census data, the data comes from a more scattered variety of sources. The Estonian 2000 Census did have the ethnic, citizenship and age breakdown of the population explicitly and so, was the easiest to work with and produce usable visualizations. From 2012 to
2017 the Statistic Department had open records of ethnic proportions and during this period people were still expected to identify with a singular ethnicity.

For Latvia, their Statistic Department enabled us to find the breakdown of citizenship and ethnicity for each year from 2011 to 2021. However, this data does not include age break down of ethnic and citizenship groups. This makes it harder to determine if the population patterns have moved as working age individuals, retired individuals and children have different incentives to formalize or not ties to the state they live in.

Some of the sources used for model building include the United Nations Refugee Agency and the World Bank. The United Nations tracked stateless populations throughout the world by host countries and the Baltic country have been tracked since 2004. Non-citizens are considered a subset of the stateless definition as the UN definition of stateless includes refugees as well as non-citizens. This is part of the reason that we examined data of Lithuania because Lithuania does tend to have a low level of refugees. By comparing the stateless data of Lithuania, we can ensure appropriate approximate the non-citizen population of Estonia and Latvia. The World Bank data was used to gather information on total population and GDP per capita of each of the countries throughout the examined time periods.

Overall, in terms of censuses, they seem to be more interested in sex breakdowns of groups rather than cross sections of age, citizenship, and ethnicity. This may be due to it being easier to track as sex is required on official documents more often than citizenship or ethnicity.
Analysis

Data Visualization

Data visualization serves to allow viewers to see interesting associations between variables or attributes. It also allows the model developer to see potential ways to create models. These data visualizations focus primarily on ethnic and citizenship compositions of the populations of interest as prior literature was concerned regarding cultural and ethnic differences. Although it is tempting to create a spatial model displaying aspects of citizenship attainability, there are too many important dimensions for the laws to be easily visualized, especially as many dimensions have binary attributes. For this reason, there are no visualizations of the laws themselves.

Latvia

From 2011 to 2021, we were able to obtain data from the Official Statistics of Latvia that breaks down Latvia’s population by ethnicity and citizenship. In Latvia from 2011 to 2021, the second most common ethnicity is Russian, and the second most common citizenship is non-citizenship. It should be noted that more Russians have Latvian citizenship than non-citizenship or other citizenships (including Russian citizenship). This reaffirms that citizenship that aligns with ethnicity is not necessarily the most desirable for Russians. Previously in the early Soviet era, appearing at least superficially Russian could be advantageous as that was the ethnicity of many individuals in power.

The pre-Soviet changes in ethnicity confirm history books’ statements about the increase in non-titular population over the course of Soviet rule and then the subsequent bounce back of the titular population in terms of proportion. This was at least partially due to the exodus of non-
titulars leaving after independence, in particular Russian non-titulars left the former Soviet states in favor of emigrating to Russia. The Latvian ethnic facet of the grid is deceptive because the “Total” citizenship line overlaps with the “Latvia” citizenship. Nearly all ethnic Latvians in Latvia have Latvian citizenship.

When we instead examine population proportion by ethnicity from 1939 to 2019 through use of the censuses of 1939, 1959, 1979, 1989 and 2000, and the 2012-2019 data, the initial increase of Russian proportionally was a reflection of Soviet policy of Russification and rearrangement populations across the USSR.
Estonia

The Estonian 2000/2001 Census indicated age within five-year intervals, ethnicity, citizenship, sex, language experiences, and more. We focused on age, citizenship, and ethnicity as a general demographic breakdown. A choice was made to consolidate the age distribution into three groups based on which government they would have been born under. The middle group definition was chosen as it would be almost all individuals (excluding those born in 1940 and the first half of 1941) who were born under Soviet rule and thus none of them were born automatically with Estonian or Russian citizenship. This age group would receive Estonian citizenship if they were descendants who chose to apply for citizenship or underwent naturalization if non-Estonian. The group born before 1940 all could have had the option of their birth pre-Soviet citizenship after the dissolution of the Soviet Union, and many had been imported during the forced Soviet population moves of the 1960s. Finally, most of those born
after 1990 were born under independence and this composes the third grouping of Estonian residents in the following visualizations. These are children who would have inherited their parents’ citizenships, but this was also the first group of people to be born as non-citizens and could not undergo naturalization themselves until they were 16 at the time of this census was taken.\textsuperscript{83} Non-citizens on the Estonian 2000 Census was a combination of ‘undetermined’ citizenship and a portion of ‘unknown’ citizenship. ‘Undetermined’ denoted those who were non-citizens, but ‘unknown’ could potentially include non-citizens who were less open to census takers about being non-citizens, or this could also include other countries’ citizens. ‘Unknown’ citizenship was the smallest group which is part of the reason that it possesses more unique age distributions when compared to other citizenship categories. The ‘unknown’ citizenship category consistently more heavily favors those born after 1990 compared to other citizenships, which is notable because it also reflects the uncertainty of parents or guardians who filled out the census. Realistically, children under the age of 10 would not have filled out the census themselves, so for the ‘unknown’ citizenship to weight children more heavily when comparing density distributions, this would be the result of parents’ and guardians’ choices. The combination of Russian ethnicity and unknown citizenship is noticeably different with the density distribution favoring children born after independence compared to other combinations. This could reflect the uncertainty ethnic Russian parents felt as to what citizenship would be best for their children. Still, ‘unknown’ is a very small category especially compared to ‘Undetermined’ and ‘Estonian’ citizenship. ‘Unknown’ citizenship was only 8,952 people total while there were a total of 170,349 ‘undetermined’ citizens and 1,095,743 Estonian citizens.

Non-citizens were not in danger of deportation despite fears in the early 1990s as the government was willing to issue residency and work permits.

The following visualizations are shaded so each rectangle denotes the proportion of a particular ethnicity-citizenship combination that falls within that age grouping. This allows a faster general comparison of distributions than creating 30 density plots. The difference in distributions of age for each ethnic and citizenship combination is notable. Compared to other citizenship groups, Russian citizenships have a lower proportion of Soviet era-born individuals across all ethnic groups. In 2000, there were 86,067 Russian citizens in Estonia. Some literature had previously suggested that individuals chose to pursue Russian citizenship because they wanted to pursue business opportunities with Russia. It is possible that these individuals chose to make Russia or another country their main residence and were not properly captured by the census. The difference in density of Russian citizens is also seen in the unusually high proportion of individuals with Russian citizenship born before the war. This points to an older generation of Russian citizens who choose to make Estonia their home, even though they are not Estonian citizens. Some older respondents to surveys mentioned desire to stay in Estonia without citizenship because their dachas and properties that they spent preparing for old age and vacations were in Estonia. The overrepresentation of older generation and underrepresentation of the Soviet era-born generation may be an indication that Russian citizens who were 10 to 60 years old in 2000 found it more advantageous to live elsewhere and leave the older generation behind.

85 Ibid.
Comparison between Latvia and Estonia

From data seen in Budryte’s *Taming Nationalism*, one can see that in all of the Baltic states Russian emigration from the countries peaked in 1992, the year after 1991 when the Baltic states became independent and were admitted to the United Nations. This seems logistically feasible and realistic as this would allow people to make plans and arrangements for travel and relocation after confirming a change in government. The increasing emigration before 1992 reflects the Russian populations anticipating and acknowledging the changing political tide as well as the fact that travel across borders was more permissible. Although Latvia had a larger population than Estonia, Latvia only had slightly larger counts in emigration which means in terms of proportion of population, the emigrating Russian population from Latvia was actually smaller than Estonia.
All Baltic States have been facing a declining population in the 21st century as a combination of emigration to Western Europe and declining birth rates. Following the initial surge of emigration after the Soviet collapse, most of the population decline came from declining birth rates, although there was still some emigration. Notably after the Baltic States joined the EU in 2004, Baltic citizens were more easily able to move throughout the EU for economic opportunities.

Finally, in terms of stateless population, all have seen a steady decline as seen from UN Refugee data. Although a small portion can be accounted for by change in overall birth rates, the majority cannot be. Instead, this fast decline implies either mass emigration or naturalization. As we can see from earlier graphics and parts of this paper that emigration peaked in the 1990s meaning that the more likely cause is naturalization. Given that naturalization is the probable cause, then prompts the interest in examining and comparing the rates between countries.
Although Latvia has faster overall rates of declining stateless population, it should be noted that the decline appears asymptotic when looking purely at counts of stateless. Estonia also has a somewhat asymptotic appearance. The inclusion of Lithuania was to demonstrate that the United Nations definition of stateless people means that refugees are included in this count as well as individuals holding the unique status of undetermined or non-citizen in Estonia and Latvia. The Baltic States have accepted refugees from North Africa and Middle East as requested by the EU. However, the number of refugees in Lithuania has a maximum of 9,028 but is generally between 2,500 and 4,000 in most years after 2004. As Latvia and Estonia have smaller populations and similar refugee policies to Lithuania, it is not unfeasible to assume that refugees occur in similar or smaller counts. This allows us to treat the UN Refugee data as approximates of the population of undetermined citizens or non-citizens as the refugee population does not dramatically increase the statelessness count.
When we instead examine the proportion of the population that is stateless over time for Latvia and Estonia using the UN data and World Bank population estimates, we see a different picture. Instead, there appears to be almost linear trends in decreasing stateless population in the two countries. The vertical lines denote the most notable changes to citizenship law in the displayed time period. For Estonia, this legal change went into effect in 2016 and resulted in children automatically being granted citizenship and is marked in blue. There doesn’t seem to be a superficially noticeable change in behavior for Estonia’s proportion around this marker. The red line reflects how Latvia put into effect a series of amendments to their citizenship law in 2013, which simplified the naturalization process especially for those over 65 years old and/or disabled. There does seem to be a change in rate between 2011 and 2012, which is before the Latvian amendments went into effect, however it is possible that this was due to increased interest in the naturalization process. However, it could be argued the other way that the state wished to continue and encourage more naturalization among the stateless and wanted to continue a trend.

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Models

There are multiple ways we could approach modeling this subject matter. We decided to focus on two approaches: OLS approach and ARIMA time series. Regardless of model type, statistical significance will be determined at the traditional alpha = .05 confidence level in this section.

Ordinary least squares is a commonly used approach in modeling due to the ease of interpreting the results. It has four mandated assumptions: linear in parameters, random sampling if sampling is done, an error cannot be dependent on parameters, and no multicollinearity. These are not impossible assumptions for the data to meet, but they do require consideration. The models discussed were chosen selected using best subset of parameters based on the best adjusted R-squared of all models examined.
Time series allows us to instead consider the situation through a temporal lens. ARIMA stands for Auto-Regressive Integrated Moving Average and allows past errors or predicted means to influence future values and predictions. This approach instead allows us to consider the idea that people are influenced by past years’ numbers.

Although a difference-in-difference in approach regarding the 2013 and 2016 amendments is tempting, it is not possible due to Latvia and Estonia failing the parallel trends assumptions. The functions of population proportion on year have different coefficients and the confidence intervals of the coefficients do not overlap, though we acknowledge that visually the lines seem almost parallel. As such, difference-in-difference was not possible.

All models examine proportion of the population that is stateless as the variable of interest. This is because it is a practical approach to examining the presence of stateless people as it makes them more comparable as Latvia has a larger overall population than Estonia. It also works well as past literature showed non-citizen and citizen have similar lifestyle accessibility, so one would expect similar birth and death rates across groups. Finally, population proportion does not require transformations to ease model building that population counts would require.

**OLS Approach**

**Estonia**

There are 4 variables to consider: years since independence, Estonian GDP per capita, Russian GDP per capita, and a binary variable denoting the application of the 2016 amendments to the Citizenship Law, which was the largest legal change in the examined time period.\(^8\) Please note that the GDP per capita is calculated in 2020 US dollars. All 4 of these potential parameters

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have a linear relationship with the outcome of interest which is the proportion of the population that is stateless, meaning that transformations are not necessary. Four potential parameters gives us 16 linear models to examine. Adjusted R-squared was chosen as the metric of comparison between models, with higher values being more desired.

Of all 16 models considered the highest adjusted R squared produced was .9411 and uses only number of years since independence and Russian GDP per Capita. This means that the variation in values of these two variables was able to explain 94.11% of variation in proportion of the Estonian population that is stateless as calculated by the OLS regression. Both exogenous variables are statistically significant in this model. In this model, when Russian GDP per capita is held constant, each year sees an associated decrease of .002637 in terms of the proportion of the Estonian population that is stateless. Russian GDP per capita also has a negative coefficient, meaning that increase in per capita GDP in Russia is associated with a decrease in the proportion of population that is stateless. It is possible that this association is due to overall economic improvement encouraging people to adopt citizenship of nearby countries: Russia or Estonia.

```
Residuals:
       Min        1Q   Median        3Q       Max
-0.0055228 -0.0026688  0.0003793  0.0016918  0.0089398

Coefficients:            Estimate Std. Error t value Pr(>|t|)
(Intercept)       1.398e-01  4.212e-03  33.188 1.03e-14 ***
Yrs_Indep         -2.637e-03  2.101e-04  -12.554 5.23e-09 ***
Russia_GDP_Per_Capita -9.620e-07  3.202e-07  -3.004 0.009477 **
---
Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 0.003755 on 14 degrees of freedom
(17 observations deleted due to missingness)
Multiple R-squared: 0.9485,    Adjusted R-squared: 0.9411
F-statistic: 128.9 on 2 and 14 DF,  p-value: 9.631e-10
```
If we choose to exclude the years out of concern for potential multicollinearity due to the size of the confidence interval of correlation between years and the other variables, then the highest adjusted R-squared is .8383 and uses only Estonian GDP per capita. This means that the variation in Estonian GDP per capita can explain 83.83% of variation in proportion of the Estonian population that is stateless given the OLS regression. In this model, improvement in Estonian GDP per capita of one US dollar is associated with a decrease in the expected proportion of the population that is stateless of -.000003405. As a single dollar increase is harder to comprehend, it may be easier to consider it as for each increase of Estonian GDP per capita by $1000 is associated with a .003405 decrease in proportion of the population that is stateless.

Residuals:

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<th>Min</th>
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<th>Median</th>
<th>3Q</th>
<th>Max</th>
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Coefficients:

| Estimate | Std. Error | t value | Pr(>|t|) |
|----------|------------|---------|---------|
| Intercept | 1.337e-01  | 6.649e-03 | 20.102  | 2.93e-12  *** |
| Estonia_GDP_Per_Capita | -3.405e-06 | 3.717e-07 | -9.162  | 1.56e-07  *** |

Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 0.006223 on 15 degrees of freedom
(17 observations deleted due to missingness)
Multiple R-squared: 0.8484,  Adjusted R-squared: 0.8383
F-statistic: 83.94 on 1 and 15 DF,  p-value: 1.561e-07

The binary 2016 amendments variable was statistically significant in the models when it was the sole predictor (producing an adjusted R squared of .4013), when paired with years since independence (producing an adjusted R squared of .9301), and when it was paired with the Russian GDP per capita (producing an adjusted R squared of .7779). As there is concern regarding multi-collinearity between years since independence and whether the 2016 amendments were in effect, this means the most useful model where the amendment is statistically significant is when it is paired only with the Russian GDP per capita. In this model,
the amendment variable and the Russian GDP per capita variable can explain 77.79% of variation in proportion of population as calculated by the linear regression. As shown by the table, the model of Russian GDP per capita and the amendment variable results in an equation in which holding Russian GDP per capita constant, the implementation of the various 2016 Estonian amendments is associated with a 0.02178 decrease in the proportion of Estonian population that is stateless, or approximately 2 percentage point decrease.

<table>
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<th>Residuals:</th>
<th>Min</th>
<th>1Q</th>
<th>Median</th>
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Coefficients:

|                | Estimate | Std. Error | t value | Pr(>|t|) |
|----------------|----------|------------|---------|---------|
| (Intercept)    | 1.103e-01 | 6.125e-03 | 18.010  | 4.43e-11 *** |
| Russia_GDP_Per_Capita | -2.829e-06 | 5.503e-07 | -5.141  | 0.00015 *** |
| Child_Amend_2016 | -2.178e-02 | 3.882e-03 | -5.611  | 6.42e-05 *** |

Signif. codes: 0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 0.007293 on 14 degrees of freedom
(17 observations deleted due to missingness)
Multiple R-squared: 0.8057, Adjusted R-squared: 0.7779
F-statistic: 29.02 on 2 and 14 DF, p-value: 1.047e-05

Overall, the Estonian models demonstrate that linear regression offers multiple viable parameter combinations. In particular, it should be noted that the amendments of interest are associated with a notable drop in proportion of Estonian population when years since independence is not used as there are potential multi-collinearity issues with using both of these variables at the same time. It also shows that GDP per capita can be useful in examining the situation.

**Latvia**
There are 4 variables to consider: years since independence, Latvian GDP per capita, Russian GDP per capita, and a binary variable denoting the application of the 2013 amendments to the naturalization process, which was the largest legal change in the examined time period.\textsuperscript{89} Please note that the GDP per capita is calculated in 2020 US dollars. All 4 of these potential parameters have a linear relationship with the outcome of interest which is the proportion of the population that is stateless, meaning that transformations are not necessary. Four potential parameters give us 16 linear models to examine. Adjusted R-squared was chosen as the metric of comparison between models for the sake of consistency when comparing with the Estonian models, with higher values being more desired.

Of all 16 models considered, the highest adjusted R squared produced was .9827 and uses years since independence, Russia’s GDP per capita, and the binary amendments variable. Both the year and GDP variable are statistically significant, but the amendment variable is not. In this model 98.27\% of variation in Latvian population proportion can be explained by variation in the independent variables. The statistically significant parameters are all associated with decreases in the expected proportion of the Latvian population that is stateless. The amendment fails to be associated with a change in the population when years and Russian GDP per capita are both held constant.

If we choose to exclude the years since independence variable out of concern for multicollinearity with the other variables due to the confidence intervals of correlation, then the highest adjusted R-squared is .8589 and uses Russia’s GDP per capita, Latvia’s GDP per capita, and the binary amendment variable. This means that 85.89% of variation in Latvian population proportion could be accounted for by variation in Latvian and Russian GDP per capita as calculated by proportion on the linear equation of GDPs and amendment variables. Both the amendment variable and Latvia’s GDP per capita were statistically significant, but Russia’s GDP per capita was not statistically significant. Holding Russian and Latvian GDP per capita constant, the implementation of the 2013 amendments is associated with a decrease of .0295 in the proportion of Latvian population that is stateless. This is a decrease of almost 3 percentage points in proportion.
The only times the 2013 amendments were statistically significant in the model were when it was the sole predictor (producing an adjusted R-squared of .706), was paired with Russian GDP per capita (producing an adjusted R-squared of .8113), was paired with Latvian GDP per capita (producing an adjusted R-squared of .8536), or was paired with both Latvian GDP per capita and Russian GDP per capita (producing an adjusted R-squared of .8589).

Essentially, as long as the years since independence variable was excluded, the presence of the amendment variable was statistically significant. The largest adjusted R-squared is the one which also includes the GDPs per capita of both Latvia and Russia and has already been discussed in a prior paragraph.

The Latvian OLS models considered all saw that when a parameter was statistically significant it had a negative coefficient, with increasing GDP per capita, the progress of time, and the passage of the 2013 amendments all associated with decreasing proportion of the population that is stateless.
**Time Series Approach**

An alternative approach that considers the potential of observations being influenced by past observations is to examine it through time series to account for potential temporal influences from past means and errors. After removing the relevant trends, the remaining residuals are to be dealt with through ARMA models. In the case of our models, we chose to use AICc as the metric to minimize, as it penalizes additional parameters greater than AIC and still provides a metric of information loss to minimize. Also, AICc is better suited to small sample sizes than AIC, so AICc is the better comparison metric.

**Estonia**

The model was chosen as it had the lowest possible AICc score and also proved to create appropriate residual plots, ACF, and quantile plots. The best model ended up being an ARIMA(1,1,0) meaning that there is only one $\varphi$ and no $\theta$. The middle number refers to the fact that differencing was required. This model also included external regressors on time to enable more efficient detrending from the linear trend seen in the data visualization section. This resulted in $\varphi = .5845$, and a coefficient of linear detrending of -0.0039; both of these coefficients were statistically significant and resulted in a $\sigma^2$ of .000006285 or a $\sigma$ of 0.00250699, which seems reasonable and within the realm of usefulness. We can take this model and use it to forecast future values. The graphic shows predictions in red for years 2021 through 2030 as the data is from 2004 through 2020. The two shaded regions depict prediction intervals, with the darker inner region denoting the 90% confidence interval and the larger region denoting the 95% interval. According to this model, if Estonia followed trends from 2004 to 2020, then the earliest there could be no stateless people left would be 2028, as that is the first time that the value 0 is included in the prediction interval.
The model was chosen as it had the lowest possible AICc score and also proved to create appropriate residual plots, ACF, and quantile plots. The best model ended up being an ARIMA(0,1,0) meaning that there is no $\phi$ and no $\theta$. This is simply a random walk with drift. The only parameter that needed estimated was the constant of -.0056 which was statistically significant, meaning that there is an average annual decrease of .0056 in the proportion of the Latvian population that is stateless. This model resulted in a $\sigma^2$ of .00001274 or a $\sigma$ of 0.003569314, which seems reasonable and would permit the model to be useful. The model was used to predict 10 future values. The graphic shows predictions in red for years 2021 through 2030 as the data is from 2004 through 2020. The two shaded regions depict prediction intervals, with the darker inner region denoting the 90% confidence interval and the larger region denoting
the 95% interval. According to the this, if Latvia continues with trends from 2004 to 2020, then there is still expected to be stateless population by 2030, as zero has yet to enter any of the prediction intervals. However, if the years predicted is allowed to expand, then the first time the value zero enters a 95% confidence prediction interval, then the first interval to include zero is in 2035.

Conclusion

There is not a discontinuity in the change rate which implies that a specific event was not an instigator of a decrease in non-citizens through emigration or naturalization when GDP per capita of the home country, GDP per capita of Russia and years independent are held constant. This potentially implies that the long-term pressure is a more prevalent factor. This long-term
force is likely a composition of internal and external relations. International external pressure long term pressure that Russia has attempted to exert on ex-Soviet states after the Soviet collapse and the general disapproval of the European Union of the existence of non-citizens. Internal pressures may be in theory the additional advantages of citizenships in terms of job opportunities and politics, or a general social pressure and a desire to have similar citizenship to those who one has close relations with.

In general, we cannot determine causality due to limitations of the data. We can say that there appears to be an association between the major amendments passed in that time period and the decreasing population proportion as long as the variable years is excluded to prevent multicollinearity. Due to the binary nature of amendment variables, their impact appears superficially larger when compared to the GDP impact, but one must remember that the GDP per capita variable was not normalized as we wanted the variable to still be interpretable.

The non-citizen and alien populations in Latvia and Estonia have been and continues to be a developing situation that appears to be on the path to eventually becoming full citizens. This is especially true as children can no longer be granted non-citizen or alien passports at birth, meaning even if no non-citizen chooses to pursue naturalization, eventually this population will disappear. However, the rate of assimilation is different than one would expect if it was still simply due to death. We expect that this is due to cultural assimilation that prior studies had seen increasing since the mid-1990s. The non-citizen (aka undetermined citizenship) population of Estonia is likely to disappear before Latvia. Latvia’s prediction intervals do not even include zero until 2035 whereas Estonia’s prediction intervals start including zero in 2028. This is expected partially due Estonia having a smaller proportion of their population being stateless to begin with, but it is also interesting as the Estonian stateless population have more access to
political action as they can participate in local elections. However, if we examine rates of change, we see that the proportion of Latvia that is stateless is decreasing at a faster rate than Estonia. In the linear models of proportions only on years since independence, Latvia has a rate of \(-0.0053548\) with a coefficient standard error of \(0.0002446\) while Estonia has a rate of \(-0.0029316\) with a coefficient standard error of \(0.0002303\). The 95% confidence intervals of these two rates do not overlap. The larger proportion of Latvia’s population being stateless means that even with a faster rate of decreasing stateless proportion disappearance, the Estonian stateless population proportion will approach zero first.

However, this model might not able to update with new data from the same sources in the future due to the recent invasion of Ukraine. The stateless data is from the UN Refugee Agency, meaning that it includes refugee counts as well. Both Estonia and Latvia have been accepting Ukrainian refugees, meaning that it will be difficult to compare annual stateless estimates with UN data as the 2022 data will include Ukrainian refugees inflating the stateless count significantly beyond the non-citizen passport holders in Latvia and alien passport holders in Estonia. Instead, we will be restricted to the less frequent stateless population data that the respective governments report themselves for future model building.

It is not unreasonable to expect the situation in Ukraine to influence future trends in the unique populations Estonia and Latvia. As the existence of the alien passport and non-citizen passport in these two countries serves as a reminder of past Soviet subjugation, the limited perks of being stateless may decrease relative to the stigma of Soviet association. Putin’s aspirations to take Ukraine would bring back memories of the Soviet Union’s empire building in the 1920s and 1940s and of Russian invasions from even before that. For the stateless population created from the dissolution of the Soviet Union, becoming naturalized would serve as a signal of greater
loyalty to the countries they call home and signal disapproval at the idea of another Russian invasion. Although the rate of change of proportion of statelessness did not change after the 2014 invasion of Crimea, one would expect that the 2022 invasion be more impactful on people’s attitudes towards citizenship due to the scale and coverage of the present war.

Latvia and Estonia are evolving situations that will need to be examined and any models updated to account for the changing geo-political landscape. The concept of citizenship is one that is not settled merely at the creation of a state as laws cannot predict all the minute details and needs of the future. Estonia and Latvia have both at least partially adapted to international expectations regarding citizenship. Time seems to be the greatest force in assimilation and assimilation presently does not show signs of reversal. Within the next two decades, neither country is likely to continue to have non-citizen (Latvia) or alien (Estonia) populations.

**Bibliography**


