# MUNI

### Faculty of Economics and Administration Masaryk University

## Blast from the Past: Essays on the Long-Term Impacts of Historic Events

**Habilitation Thesis** 

Štěpán Mikula

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#### Introduction

Can events that are long past affect us in the present? This is a pivotal question in what is known as *persistence literature*, a strand of literature that has developed in economics and political science over last two decades and consists of empirical studies demonstrating the mid- and long-term effects of historic events—some of them centuries old.

Cirone and Pepinsky (2022) recognize four broad topic clusters in persistence literature on the basis of studies published in top general economics and political science journals: (a) the long-term impacts of colonialism and pre- and non-colonial state forms (e.g. Acemoglu et al. 2001; Dell 2010; Becker et al. 2015); (b) the origins and legacies of the Holocaust and other forms of mass violence or radical reform (e.g. Acemoglu et al. 2011; Akbulut-Yuksel and Yuksel 2015; Becker et al. 2020); (c) agglomeration and the infrastructural foundations of contemporary economic development (e.g. Pascali 2016; Nunn 2020); and (d) the legacies of slavery (e.g. Nunn 2008; Nunn and Wantchekon 2011).

This collection of three essays adds to this literature as it examines the long-term impacts of dramatic historic events that took place in the 20<sup>th</sup> century: the mass expulsion of ethnic Germans from what is now the Czech Republic and the subsequent resettlement of the area known as the Sudetenland (*Sudety*), and periods of dictatorial communist rule in Central and Eastern Europe. Besides documenting the these historic events' persistent impacts, the essays also contribute to our understanding of general problems—in particular the link between social capital and migration and the effects of misinformation campaigns on voting behaviour.

The first two essays focus on long-term impacts on migration and willingness to migrate. Guzi, Huber, and Mikula (2021)<sup>1</sup> analyze what long-term impact the resettlement of the Sudetenland after World War II had on residential migration. This event involved the expulsion of ethnic Germans resulting in the almost complete depopulation of the Sudetenland, followed by a rapid resettlement of the area by 2 million Czech inhabitants.

<sup>1.</sup> Martin Guzi et al. 2021. "The long-term impact of the resettlement of the Sudetenland on residential migration." *Journal of Urban Economics* 126:103385. Full text of the paper is available at https://www.sciencedirect.com/science/article/pii/S009411902100067X.

The results, based on a regression discontinuity design, show a highly persistent higher population churn and thus that the resettled area's residents have a lower attachment to their region even today. Descriptive evidence also indicates that resettled settlements still have fewer local club memberships, organize local social events less frequently and had lower turnout in municipal elections until the 1990s. This suggests persistently lower levels of local social capital. This finding is consistent with recent theoretical models that suggest a that destruction of local social capital has a highly persistent impact on residential migration.

In the second essay on migration, Huber and Mikula (2019)<sup>2</sup> analyse the correlation between various measures of social capital and willingness to migrate in 28 post-communist and five western European comparison countries using the Life in Transition Survey. They find memberships in clubs and civil society organisations substantially lower in post-communist countries that in the Western European countries, mainly due to the cohorts that socialised prior to the political reforms of the 1990s. Differences in endowments with this measure of social capital explain around 2.5 percentage points of the 9–11 percentage point difference in willingness to migrate between the post-communist and comparison countries. Differences in the level of contact with friends and family, by contrast, contribute only little to explaining these differences. Furthermore, despite clear cohort effects in endowments with social capital between cohorts socialized during and after communist rule, there is no clear evidence of such cohort effects in the impact of social capital on the willingness to migrate.

The last essay also reflects the long-term heritage of post-war resettlement in the Sudetenland. However, it focuses on a different outcome: voting behaviour. Guzi and Mikula (2021)<sup>3</sup> exploit a quasi-natural experiment that emerged during the 2013 Czech presidential run-off election to identify the impact of inaccurate and misleading information on electoral outcomes. A political campaign associated a vote for one of the candidates with a legally and politically unfounded risk relevant to people owning houses confiscated from ethnic Germans after World War II. Using municipality-level data in a difference-in-differences framework, our analysis suggests that this manipulative campaign affected the electoral outcomes and increased voter turnout in municipalities with higher shares of voters at risk of the supposed threat to housing ownership.

<sup>2.</sup> Peter Huber and Stepan Mikula. 2019. "Social capital and willingness to migrate in post-communist countries." *Empirica* 46 (1): 31–59. Full text of the paper is available at https://link.springer.com/article/10. 1007/s10663-018-9417-7.

<sup>3.</sup> Martin Guzi and Štěpán Mikula. 2021. "Careful what you say: The effect of manipulative information on the 2013 Czech presidential run-off election." *Economics Letters*, 110152. Full text of the paper is available at https://www.sciencedirect.com/science/article/pii/S0165176521004274.

I describe Guzi et al. (2021) and Huber and Mikula (2019) in detail in Chapter 1, and Guzi and Mikula (2021) in Chapter 2. Both Chapters discuss the methodology used in the studies and provide reviews of relevant literature.

The authors of the studies described in this collection are listed in alphabetical order. Chapter 3 provides an overview of their individual contributions. The full texts of all the studies, including appendices, are attached in Appendix A.<sup>4</sup>

<sup>4.</sup> The public version of habilitation thesis does not contain the Appendix due to legal reasons. However, all essays included in the collection are available on-line. For links see footnotes 1, 2, and 3.

## **Chapter 1**

# The impacts of historic events on migration

Persistence literature has more often looked at migration as an initial cause that triggers long-term effects (see e.g. Becker and Ferrara 2019) than as a consequence of other events. In the papers I present here, I focus on one particular channel through which historic events can have lasting effects on migration behaviour: via changes in social capital – i.e. changes in the network of contacts between people.

Theoretical models of local social capital accumulation (David et al. 2010; Bräuninger and Tolciu 2011) have described individual investments in social capital as a function of a community-level stock of social capital. A higher stock brings higher returns to those who (a) previously invested and (b) stay in the community. These models typically produce two stable equilibria: communities with high social capital and low mobility, on the one hand, and communities with low social capital and high mobility on the other.

The empirical part of this literature confirms that current and previous social contacts have a strong impact on mobility and suggests that local contacts in particular represent an impediment to mobility, while contacts in other regions enhance it. For example Kan (2007) and Belot and Ermisch (2009) show that people with contacts in their region of residence are less inclined to move elsewhere, while Büchel et al. (2020) show that mobile individuals prefer to live in places with more nearby contacts. This literature, however, considers the contemporaneous correlation between social capital and migration (i.e. in the short run). Recent evidence by Costa et al. (2018) also indicates that social contacts have a persistent impact on individual's location decisions in the long run, as civil war veterans serving in the same military unit tend to live close to each other in the long run.

In this chapter I present two papers that explore the long-term impacts of historic events that substantially affected the level and structure of social capital on migration.

## 1.1 The long-term impact of the resettlement of the Sudetenland on residential migration (Guzi, Huber, and Mikula 2021)

A growing body of economic and political science research documents that the disruption of social structures caused by forced mass emigration has long-lasting and sizeable effects on the political attitudes (Acemoglu et al. 2011; Grosfeld et al. 2013), institutional, economic and educational outcomes (Acemoglu et al. 2011; Akbulut-Yuksel and Yuksel 2015; Pascali 2016; Bharadwaj et al. 2008; Testa 2020) and scientific achievements (Waldinger 2010, 2011) of the affected regions as well as on the forced migrants and their descendants (Becker et al. 2020). This literature (Becker and Ferrara 2019, for a survey see:) suggests that these impacts are substantially more long-lasting and sizeable than those found in the related literature on the destruction of physical capital (Brakman et al. 2004; Waldinger 2016). The long-run demographic impact of mass emigration has so far been much less analyzed. Among the exceptions, Schumann (2014) focuses on population growth in a receiving region to provide evidence that mass immigration to West Germany after World War II had a highly persistent demographic impact.

The presented paper adds to this literature by using the post-World War II mass expulsion of ethnic Germans from the area of today's Czech Republic known as the Sudetenland to study the long-run impact of this expulsion and the subsequent resettlement of the region on migration to and from the resettled regions. The resettlement of the Sudetenland is particularly well suited to identifying such long-run impacts due to the extent of the population exchange, the extraordinary speed with which ethnic Germans had to leave the region and the rapidity with which the area was subsequently resettled. With the exodus of the ethnic Germans, all the local population's existing social networks and contacts were destroyed and the newly arriving population had to re-establish all social contacts anew. This constituted a large scale and credibly exogenous shock to local social capital in the affected region. In addition, the fleeing population had to leave behind all of their belongings as well as all physical capital. This was rapidly taken into possession by the settlers, who arrived swiftly, mostly from other parts of the Czech Republic. This limits the possible role of some alternative potential explanations of observed long-term differences in regional development, such as physical capital destruction or cultural or institutional differences, identified in previous research (Grosfeld et al. 2013; Becker et al. 2015; Dell 2010; Alesina and Giuliano 2015).

The rest of this section is organized as follows. First I present a brief overview of the expulsion of the ethnic Germans and subsequent resettlement of the Sudetenland in Section

1.1.1. Sections 1.1.2 and 1.1.3 describe the data used, the methodology, and the baseline results. The final Section 1.1.4 provides an overview of ongoing research in this area and potential avenues for future research.

#### 1.1.1 Resettlement of the Sudetenland after World War II

Germans had lived in what is now the Czech Republic since the 13<sup>th</sup> century and, with the exception of a short period under German occupation from 1938 to 1945, their territory of settlement was always administered by the same state as the rest of today's Czech Republic. Compared with the Jewish population studied in the literature, the ethnic Germans in the Czech territory were never a discriminated group (e.g. Alexander 2008; Meixner 1988). During the Austro-Hungarian Empire, of which today's Czech Republic was a part from the 16<sup>th</sup> century until 1918, they tended to be more privileged relative to the ethnic Czech population partly because they spoke the official language of the empire.

The German speaking population was, however, clearly segregated from the Czech population. According to the last Czechoslovak census prior to World War II, the German speaking population mainly resided in a well-defined territory in the north, west, and south of today's Czech Republic, known as the Sudetenland (see Figure 1.1),¹ and the number of municipalities in which both Germans and Czechs resided in equal numbers was rather low (see Figure 1.2). Differences in economic and population structure between the German-speaking and Czech-speaking territories were small, according to the results of this census. In particular, while the region where ethnic Germans dominated were less agricultural and more industrial, the share of migrants living in the Czech- and German-speaking regions—which is the only proxy for migration provided in the 1930 census—were rather similar.

Historic accounts also suggest that the relationships between the two population groups were relatively unproblematic for most of the time. Ethnic tensions began to develop between Czechs and Germans arose in the second half of the 19<sup>th</sup> century and continued after the break-up of the Austro-Hungarian Empire, when ethnic Germans comprised 29.5% of the population, according to the 1930 population census (see CZSO 2014). Historical records document a number of complaints from members of the German-speaking population during the interwar period, inter alia about limited access to civil service jobs, the closure of German-speaking schools, and inequalities in the impact of land reforms in the 1920s. Yet, according to many accounts (e.g. Glassheim 2000) minority policy in Czechoslovakia was one of the most liberal in Central and Eastern Europe at the time. Ethnic tensions severely intensified only as the economic crisis hit in 1933 and German nationalist political

<sup>1.</sup> The word Sudetenland is used in common language to denote the territories settled by the ethnic Germans before World War II.

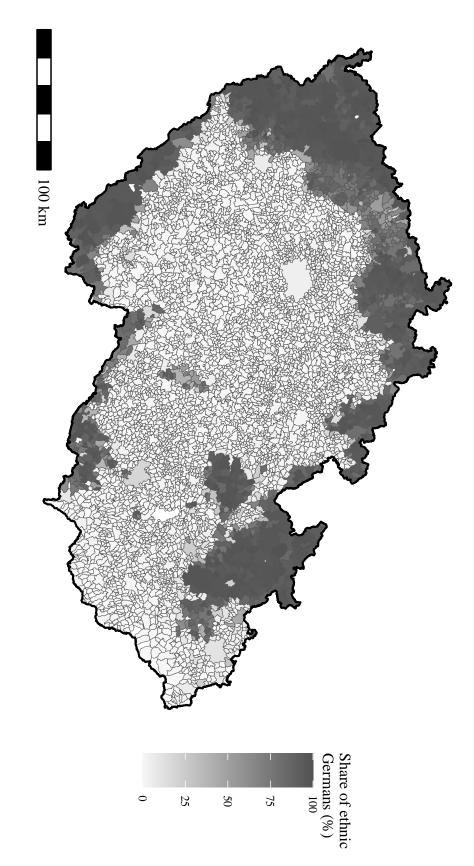


Figure 1.1: Share of ethnic Germans in municipalities in 1930.

Germans is harmonized with the 6,168 municipalities defined in the 2011 census using matching rules provided by the CZSO. Source: CZSO, own calculations. Note: The ethnic German population is defined according to the primary language spoken. The 1930 municipality-level data on ethnic

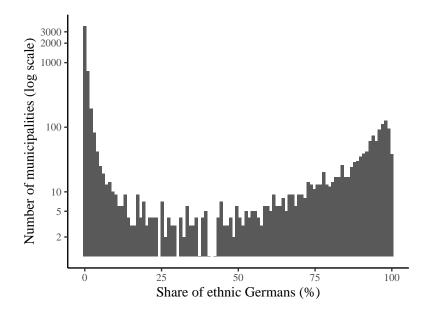


Figure 1.2: Distribution of municipalities by share of ethnic Germans in 1930.

Source: CZSO, own calculations. Note: The ethnic German population is defined according to the primary language spoken. The 1930 municipality-level data on ethnic Germans is harmonized with the 6,168 municipalities defined in the 2011 census using matching rules provided by the CZSO.

parties became more popular. Under the Munich Agreement in 1938, the Sudetenland was annexed by the German Reich and remained under German rule until the end of World War II.

In the aftermath of World War II, the Czech population held the ethnic Germans responsible for the Nazi atrocities and considered traitors. This perspective ultimately led to their expulsion from the country, which started with the end of World War II in May 1945 and proceeded in two phases. The initial phase, referred to as the "wild expulsion", was poorly organized and controlled within a vague legal framework. In this phase, up to 800,000 Germans had left the country by the autumn of 1945 (Wiedemann 2016). The second, more organized phase took place between January and October 1946 based on agreements made at the Potsdam Conference. By the end of the second phase the ethnic German population, which had been 3 million in the prewar period, had been reduced to just 200 to 300 thousand (Gerlach 2017). The share of ethnic Germans in the Czech population decreased from 29.5% (based on the 1930 census) to 1.8%² as can be seen from the first postwar census in 1950 (CZSO 2014).

<sup>2.</sup> Data on ethnicity from the 1930 and 1950 censuses are not fully comparable due to methodological changes. Nevertheless, historians' estimates are very similar to the figures from the 1950 census data. According to Staněk (1991) there were 216,545 inhabitants of non-Slavic origin in Czechoslovakia in 1947. Those Germans who did remain were subjected to an internal relocation policy (Dvořák 2013).

The process of resettling the Sudetenland took place in parallel with the expulsion and was also rather rapid. Initially, newspapers and radio broadcasts encouraged people to seize German properties and this behaviour was supported by Czech soldiers, militias, and security forces (Glassheim 2000). During the *wild expulsion*, (i.e. within the first year of expulsion) between 500,000 and 900,000 new settlers arrived in the Sudetenland.<sup>3</sup> In addition Wiedemann (2016) states that massive inflows of settlers continued until 1947 (i.e. one year after the beginning the second phase of deportation and two years after the end of World War II) and that resettlement was largely over by the end of 1952, with only modest inflows continuing on until the end of the 1950s.<sup>4</sup> Similarly, Gerlach (2010) finds that almost 2 million new ethnic Czech settlers had arrived to Sudetenland by May 1947, while earlier estimates by Radvanovský (2001) suggest an influx of 1.5 million over the first 2 years of resettlement. In sum, then, resettlement took place rather rapidly and was clearly already complete in 1971, when our period of analysis starts.

#### 1.1.2 Data and Methodology

We combine a unique municipality-level administrative data set that includes all permanent residence changes in the years 1971 to 2015 with pre-World War II municipality-level data on the municipalities' ethnic composition in 1930. This allows us to identify the causal effects of resettlement on residential migration by comparing the most strongly affected municipalities with more than 90% ethnic Germans in 1930 (which we refer to as *resettled municipalities*) to municipalities with less than 10% ethnic German residents in 1930 (referred to as *not resettled municipalities*) in a regression discontinuity (RD) design identification strategy (Dell 2010; Becker et al. 2015; Egger and Lassmann 2015; Oto-Peralías and Romero-Ávila 2017). In the RD design the inference is based on a precise definition of the border between ethnic German- and Czech-dominated areas before World War II. Specifically, we estimate the following baseline specification:

$$y_{it} = \gamma RM_i + \beta \mathbf{Z}_{it} + f(d_i) + \phi_r + \phi_t + \phi_s + \xi_{it}$$

$$\tag{1.1}$$

where  $y_{it}$  is one of the three outcome variables (emigration, immigration, and net immigration rates) defined for municipality i in year t, RM $_i$  is an indicator variable for a resettled municipality, and  $\mathbf{Z}_i$  includes geographical variables (log of altitude, roughness

<sup>3.</sup> Radvanovský (2001) estimates that 514,515 settlers had arrived in the Sudetenland by September 16, 1945. Wiedemann (2016) states that by mid-October there were 696,554 settlers and by the end of 1945 there were 862,706.

<sup>4.</sup> A number of anecdotes, according to which new settlers ended up cohabiting with Germans about to be expelled when deportation trains were delayed, also testify to the speed of the resettlement (Wiedemann 2016).

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of the terrain roughness, log of the shortest distance to the Czech border and second order polynomials of the degrees of latitude and longitude of the municipality) while  $\eta_{it}$  is the error term. The year fixed effects  $\phi_t$  are included to control for changes in institutions and economic developments affecting all municipalities alike, and  $\phi_r$  are region fixed effects that control for any region-specific features of the outcome variable. As the migration rates tend to be slightly higher in larger municipalities we also include population fixed effects  $\phi_s$  (decile of the 1930 population). These account for potential differences in migratory moves between municipalities of different sizes.<sup>5</sup> The baseline specification (1.1) could be also extended to capture the treatment effect dynamics.

The published paper also presents non-parametric estimates as well as a number of robustness checks. Some robustness checks are based on the use of an alternative estimator (geographical matching) that does not require a definition of the ethnic border between formerly Czech- and German-dominated areas.

#### 1.1.3 Results and potential mechanisms

The results indicate that resettlement led to a long-lasting increase in residential migration to and from the resettled municipalities and that this increase survived such important institutional changes as the transition from a planned to a market economy, the dissolution of Czechoslovakia and accession to the European Union, and the many economic changes that occurred in the Czech Republic in the observation period. Even at the end of our observation period, in 2015 (i.e. 70 years after the resettlement), emigration and immigration rates in resettled municipalities were still substantially (by around 20%) higher than in municipalities that were not resettled (see Figure 1.3). In addition, at the beginning of the period studied the effects of resettlement on emigration dominate over those on immigration, such that net emigration from resettled municipalities initially increased. This effect, however, levels off to zero after the mid-1980s, and is also less robust than the effect on gross emigration and immigration rates. This suggests that—consistent with theoretical predictions—resettlement mainly resulted in a very long-term reduction in the population's attachment to the affected regions.

We consider the plausibility of two alternative potential causal mechanisms for the long-term reduction in the population's attachment to their region of residence caused by resettlement. The first is based on the self-selection of settlers to resettled municipalities: since the Sudetenland was in all likelihood resettled by the more mobile groups within the Czech population at the time, it could be that migration-related values were transferred

<sup>5.</sup> Population in 1930 is used as a control to avoid including endogenous controls and to account for the fact that the once larger municipalities in the Sudetenland may provide more infrastructure and cultural amenities than municipalities outside the Sudetenland.

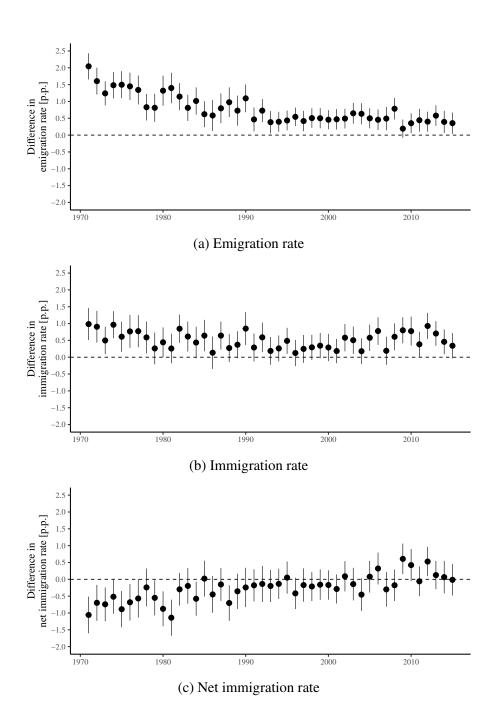


Figure 1.3: Impact of resettlement on migration rates by year.

Note: Figure reports estimates of the impact of resettlement on migration rates from Equation (1.1). Only municipalities within a 15 km band around the ethnic border are considered. The results control for the interaction of the year fixed effects with the dummy variable for resettled municipality, interaction of year fixed effects with a first-order polynomial forcing function, and region fixed effects, year fixed effects, population fixed effect, log of altitude, terrain roughness, and log of distance to the international border. Points represent point estimates and the associated bars the 95% confidence intervals of the estimates. Standard errors are clustered by municipality.

across generations among the population of the resettled municipalities such that these are still populated by more mobile population groups to this day. The second mechanism accords with many of the descriptions of the resettled municipalities by historians (Vaněk 1996; Glassheim 2006; Matějka 2008; Capka et al. 2005; Spurný 2011) and is derived directly from predictions based on theoretical models of the impact of social capital on migration decisions (e.g. David et al. 2010; Bräuninger and Tolciu 2011). It assumes that the destruction of local social capital in resettled municipalities could have moved these municipalities into a low social capital and high mobility equilibrium. This would also be consistent with recent evidence by Charnysh (2019), who provides evidence that districts resettled by more heterogenous migrant groups in Poland's westward shift after World War II also had lower local social capital (as measured by volunteer fire brigades) in 1989.

The results of our analysis of survey data and data on voter turnout suggest that the populations of the resettled municipalities do not differ in values and general pro-social behaviour: we can therefore dismiss the first potential causal mechanism. On the other hand, we do find evidence of significant differences in measures associated with local social capital based on municipality-level data on voter turnout in municipal elections (Knack 1992; Hotchkiss and Rupasingha 2018), the number of events organized by local clubs and green activities (i.e. collective activities to improve the environment and living conditions in the municipality), and individual-level data on membership of local clubs. These findings provide empirical support for the plausibility of the second potential causal mechanism.

#### 1.1.4 Selection of settlers and future research opportunities

One of the main challenges to identification is potential selection bias. Unfortunately, not much is known about the selection of the settlers. The weak regulation (and often chaotic nature) of the resettlement makes it difficult to map their socioeconomic characteristics. Wiedemann (2016), Capka et al. (2005) and Skoll (1983) show, however, that settlers were young, often married couples, landless persons, small farmers, second-born children (with low prospects for family inheritance), or individuals who had worked in the civil services or non-agricultural sectors. Historical research documents that the settlers almost exclusively moved from other regions of today's Czech Republic<sup>6</sup> and over rather short distances.

Despite the fact that we do not find any differences in values and pro-social behaviour between the populations of resettled and not resettled municipalities, it is impossible to completely reject the possibility that our results are to some extent driven by the selection of settlers. Similar selection problems present a challenge to identification in

<sup>6.</sup> Skoll (1983) notes that in the Břeclav district, located at the border with Slovakia and Austria, 90.3% of settlers were Czech, 2.1% were Slovak, and 7.6% were of other nationalities.

the majority of studies on migration and integration—including those that exploit some randomization, such as Damm (2009). To dig deeper into this selection problem we conducted an experiment (Staněk et al. 2021)<sup>7</sup> which takes the formal models developed by David et al. (2010) and Bräuninger and Tolciu (2011) into a lab. There we conduct an incentivized experiment that simulates the choice between mobility and investing into local social capital. Our results suggest that negative shocks to social capital can shift a community into an equilibrium characterized by low social capital and high mobility even in the absence of selection into treatment.

Guzi et al. (2021) and Testa (2020) explore the differences between the Sudetenland and the inner regions of the Czech Republic. However, little attention has been paid so far to differences within the Sudetenland. The only exception I am aware of is a study by Grossmann et al. (2021) who explores variation in electoral support for the communist party along the demarcation line. A possible avenue for future research would be to use 1950 census data to describe possible variation in the resettlement process and to understand its consequences for social capital formation. This could provide further evidence to the findings by Charnysh (2019), who argues that small seeds of social capital can make a substantial difference in the long term.

<sup>7.</sup> Staněk et al. (2021) is only available as a working paper and, therefore, is not included in this collection of essays.

### 1.2 Social capital and willingness to migrate in postcommunist countries (Huber and Mikula 2019)

The post-war events examined in Guzi et al. (2021) were not the only shock that shaped the level and structure of social capital in the Czech Republic during the 20<sup>th</sup> century. The dictatorial communist regimes across Eastern Europe closed borders, isolated the region behind the Iron Curtain, and introduced a specific institutional environment. They suppressed or tightly controlled civil-society organizations as they feared that these could facilitate the organization of collective action against them (Raiser et al. 2002). The previous empirical literature has often found lower levels of social capital in post-communist economies than in highly developed market economies (e.g. Fidrmuc and Gërxhani 2008; Bönisch and Schneider 2013). These differences are more pronounced for forms of social capital based on weak ties—such as memberships in clubs and civil society organisations (see Paldam, Svendsen, et al. 2000; Mihaylova 2004)—and among persons socialised under communist rule than those socialised after the fall of the Iron Curtain (see Pop-Eleches and Tucker 2013).

Exploring this setup allows us to bring (in part descriptive) evidence of the social capital-mobility link and to explain lower mobility in post-communist countries (documented by e.g. Andrienko and Guriev 2004; Fidrmuc 2004; Fouarge and Ester 2008; Huber 2005; Paci et al. 2010).

The rest of this Section is organized as follows. Section 1.2.1 contains description of data and methodology. Section 1.2.2 summarises the results.

#### 1.2.1 Data and Methodology

We use data from the second wave of the European Bank for Reconstruction and Development's Life in Transition Survey (LiTS) conducted in 34 post-communist and comparison countries in 2010. This survey randomly selected 75 (in Russia, Ukraine, Uzbekistan, Serbia, Poland, and the UK) or 50 (in all other countries) local electoral units and subsequently randomly chose 20 households within each of these and one person within each household as a respondent. It asked two separate questions on respondents' willingness to migrate, first abroad and secondly within the country, for job related reasons.

We explain the willingness to migrate (w) of an individual i living in country j in the following Equation:

$$w_{ij} = \alpha_j + \beta s c_{ij} + \sum_c \beta_c s c_{ij} + \gamma x_{ij} + \varepsilon_{ij}$$
 (1.2)

where  $\varepsilon$  is an error term, the  $\gamma$ 's are parameters to be estimated and  $\alpha_i$  is a set of country fixed effects, which control for (observable and unobservable) country-specific impacts on willingness to migrate that affect all residents alike (such as income or unemployment levels and more difficult to measure variables such as cultural and institutional differences).

The central parameters of interest in this regression are  $\beta$  and  $\beta_c$ . The parameter  $\beta$  measures the impact of social capital on willingness to migrate in an arbitrarily chosen reference country group. In our case, these are the Western European countries. The parameter  $\beta_c$  measures the deviation of this impact from the reference group in the country group c, which are either all post-communist countries or only the Central Eastern European EU (CEE-EU) countries. In this specification a test of the hypothesis that  $\hat{\beta}_c = 0$  assesses whether the impact of a social capital variable in country group c differs significantly from the impact in the comparison countries.  $\hat{\beta} + \hat{\beta}_c$  provides an estimate of the impact of the respective social capital on willingness to migrate in country groups other than the reference group and an F-test of the hypothesis that  $\hat{\beta} + \hat{\beta}_c = 0$  provides a test for whether this impact is statistically significantly different from zero in country group c.

The most important methodological issue in estimating Equation (1.2) is the potential endogeneity of social capital. This arises because investments into social capital are a decision variable and individuals with lower willingness to migrate are also likely to invest more into less portable forms of social capital. In the absence of experimental or quasi-experimental data, previous contributions to the literature have mostly accounted for this endogeneity by using instrumental variable approaches. The instruments used have included the number of siblings and parental education (Belot and Ermisch 2009; Bönisch and Schneider 2013), lagged social capital and the aggregate social capital in the region (David et al. 2010) and the individual's actual experience of helping someone else (Kan 2007).

Of these, our data contain only the regional average of the respective social capital variable. The central identification assumption for this instrument is that average regional social capital does not have a direct impact on individual-level willingness to migrate. This exclusion restriction is questionable if regions with higher average social capital are more attractive places to live in or if, as argued in a rather extensive literature (see Durlauf and Fafchamps 2005, for a survey), social capital has a positive impact on regional growth or income: in both such cases, people are less likely to emigrate from regions with high

social capital. Alternatively, the instrument is also questionable if the average social capital of a region has a positive impact on information (about e.g. job opportunities in other regions) which could increase propensity to emigrate from those regions. In the first two cases, IV-estimates based on the average regional social capital level of a region would be downward biased, while in the last case they would be upward biased. As we therefore have access to only a questionable instrument, we refrain from reporting the IV-estimates. This implies that our baseline results should not be interpreted as causal.

Our chance of obtaining causal estimates is somewhat higher if we exploit the abrupt and unexpected collapse of the communist regimes in late 1980s. That collapse also brought to an end the institutional setting that motivated people to invest in social capital based on strong ties, and created two cohorts: those who were socialized before the fall of the Iron Curtain and those who were socialized later. By estimating Equation (1.2) separately for different cohorts we can also derive insights into potential causal effects. The descriptive evidence we present in the paper suggests that East-Europeans who were socialized after the fall of communism are comparable in their level and structure of social capital to their peers in Western countries. On the other hand, as expected, the older cohort socialized during communist rule tends to be substantially lower in forms of social capital based on weak ties.

#### 1.2.2 Results

The results indicate a robust positive and statistically significant correlation between the number of memberships in clubs and civil society organizations and all measures of willingness to migrate in all country groups. One additional membership in a club or civil society organization is associated with an increase of about 2.0 percentage points in overall willingness to migrate in the comparison countries. This effect is somewhat stronger for willingness to migrate abroad (2.6–2.7 percentage points) than for willingness to migrate internally (1.7–1.8 percentage points).

The estimates for the interactions of membership in clubs and civil society organizations with the country group dummy variables do not indicate statistically significant differences from the comparison countries in most cases. The only exception is a significant result for the impact of membership in clubs and civil society organizations on willingness to migrate abroad in the comparison of all post-communist countries with the comparison countries. While endowments with this form of social capital are very different in the post-communist countries than in the comparison countries, the population's reaction to such social capital in terms of willingness to migrate is rather similar. The implied parameter estimates for each country group and the associated F-tests, indicate that membership in clubs and civil society organizations also affects all dependent variables positively and significantly in the

post-communist countries. This implies that greater investment in membership in clubs and civil society organizations is associated with a greater willingness to migrate in all the analysed country groups.

Frequency of meeting friends is also statistically significantly positively associated with willingness to migrate in most cases. This implies that more frequent contact with friends is associated with greater willingness to migrate, possibly on account of such contact providing more information about opportunities elsewhere or because such contact has other mobility-enhancing effects. Furthermore, the differences between post-communist and comparison countries in this case are statistically significantly negative only when all post-communist countries are used as the comparison group. This may be an indication that such contact is of lesser importance in these countries, which do not profit from freedom of movement in the EU to the same extent as the CEE-EU country group.

Frequency of meeting relatives, by contrast, is statistically significantly negatively correlated with all measures of the willingness to migrate in the comparison countries. Contact with family therefore acts as an impediment to mobility in these countries. However, these coefficients lose their significance in the CEE-EU countries and are also statistically significantly less negative for all post-communist countries. This may point to family ties playing a different role in the post-communist countries than in the comparison countries. One could for instance hypothesize that family members may be a more important source of information on job opportunities elsewhere in post-communist countries. Alternatively, one could hypothesize that family ties are a more important source of finance for mobility in these countries.

The results of estimating Equation (1.2) separately for the pre- and post-transition cohorts show whether the marked differences in membership in clubs and civil society organizations between generations are associated with differences in these generations' responses to social capital in terms of willingness to migrate in the post-communist and comparison countries. According to the results, membership in clubs and civil society organizations in the comparison countries is significantly positively correlated to willingness to migrate for both cohorts, but the marginal effects are much higher among the post-transition cohorts. In the post-transition cohort, one additional membership in a club or civil society organization is associated with a 5.5–6.5 percentage point higher willingness to migrate. In the pre-transition cohort this effect is between 1.0 and 2.2 percentage points. In the post-communist countries, by contrast, these effects are substantially smaller (and statistically insignificant in the case of the CEE-EU countries) for the post-transition cohort, while they are comparable to those in the comparison countries for the pre-transition cohort.

Furthermore, the results for the frequency of meeting friends and family provide no evidence of any robust impact on willingness to migrate among either the pre- or the post-transition cohorts. For the pre-transition cohort, these variables are mostly statistically insignificantly correlated to willingness to migrate in all three groups of countries. For the post-transition cohort, the frequency of meeting friends is statistically positively correlated with willingness to migrate and the frequency of meeting family members statistically significantly negatively correlated with willingness to migrate both in the comparison countries and in all post-communist countries, while both variables are statistically insignificant for the CEE-EU countries. This suggests that while there are clear cohort effects in social capital endowments (membership in clubs and civil society organisations) in the post-communist countries, the differences in parameters between the pre- and post-transition cohorts provide no clear evidence of such cohort effects.

The lack of reliable and valid instruments in the data set used in this study leaves little room for further development.

## Chapter 2

# The impacts of historic events on voting behaviour

There is a large and growing body of literature showing that historic events may have persistent effects on norms and attitudes (e.g. Becker et al. 2015; Nunn and Wantchekon 2011). A specific strand of this literature shows that historic events may leave a latent legacy that is only later activated. For instance Cantoni et al. (2019) show that change in the German political market activated a latent demand for right-wing ideology. Belmonte and Rochlitz (2019) show that a 2003 Russian country-wide government-led campaign reminding voters of traumatic events caused by the economic disruptions of the 1990s had a higher impact on voting behaviour in regions that had been worse struck by those events. Similar effects may arise even after much longer periods of time. Ochsner and Roesel (2017) shows that municipalities that suffered more war atrocities during the Turkish sieges of Vienna in the 16<sup>th</sup> and 17<sup>th</sup> centuries were more susceptible to far-right campaigns against Turks and Muslims in the 2000s.

The 2016 US presidential election also sparked a debate about what effects fake news may have on voting behaviour. The literature finds a correlation between fake news and support for populist parties (for a review, see Cantarella et al. 2020), but there is limited evidence of any causal channel between voting and fake news. Barrera et al. (2020) conducted an experiment before the French presidential election in 2017 to confirm that the exposure to fake news increased intentions to vote for the populist candidate Marine Le Pen. Cantarella et al. (2020) exploit language differences across two provinces in Italy to test the causal effect of fake news on support for populist parties.

In Guzi and Mikula (2021) we add to both strands of literature as we exploit a natural experiment that allows us to identify what effects a misinformation campaign that activated

the legacy of past events had on two electoral outcomes: support for candidates and voter turnout.

# 2.1 Careful what you say: The effect of manipulative information on the 2013 Czech presidential run-off election (Guzi and Mikula 2021)

In this paper we exploit a quasi-natural experiment that emerged during the 2013 Czech presidential election run-off: a manipulative political campaign that associated a vote for one of the candidates with legally and politically unfounded threats to housing ownership in some municipalities. The setup allows us to use administrative municipality-level data to identify the causal effect in a difference-in-differences framework.

The rest of this Section is organized as follows. Section 2.1.1 describes the 2013 Czech presidential election and historic events that provided the background for the misinformation campaign. Sections 2.1.2 and 2.1.3 present used data, methodology and results. The final Section identifies future research opportunities.

## 2.1.1 The 2013 Czech presidential election and its historical background

In January 2013, the Czech Republic held its first presidential election decided by direct universal suffrage. As no candidate won a majority in the first round on January 12<sup>th</sup>, the two top candidates Miloš Zeman and Karel Schwarzenberg proceeded to the second round run-off election. During a 14-day period these two candidates ran intense campaigns. On January 26<sup>th</sup>, Zeman won 54.8% in the second-round election and became the president. Voter turnout in both rounds reached 60%.

A major turning point in the campaign emerged in a televised debate held on January 17<sup>th</sup>, during which Schwarzenberg became embroiled in the sensitive issue of the expulsion of long-settled ethnic Germans in the aftermath of the Second World War (see Section 1.1.1), which shaped Czech citizens' present-day property ownership. Between 1945 and 1946 the Czechoslovak government, led by President Edvard Beneš, forcibly expelled 3 million ethnic Germans from the country and redistributed their houses to settlers. Settlers had to pay for the acquired property, but prices were low and amounted to one to three yearly rents. Ten percent of the total price was due at the time of property acquisition, while the remainder was payable over the following 15 years. Settlers could pay in cash

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or in kind and a substantial share of these liabilities was never paid (Wiedemann 2016). Nevertheless, settlers become the owners of properties confiscated from ethnic Germans.

This process of property redistribution was, however, rather inconsequential when it came to commercial property and arable land, as the Communist Party decided to collectivize land and industrial property throughout the Czech Republic after the 1948 coup d'état. This process started in 1949 and was by and large completed in the mid-1950s (i.e. shortly after the end of the resettlement process). After this, the Czech Republic maintained one of the lowest shares of private ownership of land and firms throughout the communist era, even among COMECON countries, and private ownership of "means of production" was virtually non-existent until the early 1990s. The decisions made by the resettlement committees were therefore relevant in the longer term only for homeownership, as residential property was the only property taken from the expelled ethnic Germans that remained in private hands after collectivization.

However, that is not to say that private property was completely safe from expropriation, even before the 1948 coup d'état. In summer 1947 the parliament approved the *Lex Schwarzenberg*, an *ad hominem* law that confiscated substantial properties belonging to Adolf Schwarzenberg—head of the Czech line of the House of Schwarzenberg and father of Karel Schwarzenberg—without providing any reason or compensation.<sup>1</sup>

The communist regime in Czechoslovakia fell in 1989, four decades after the 1948 coup d'état. The freely-elected government then began the process of restituting seized property to its original owners or rightful heirs. The restitution laws only provided for the return of property that had been confiscated by the communist regime and required that properties could only be restituted to Czechoslovak citizens. This meant that neither the Schwarzenberg family nor the previously expelled Germans were eligible to receive their former properties or compensation for them. This property restitution process was lengthy and politically complex. In November 2012, just two months before the presidential election, legislation on returning property to churches was adopted after a political debate that had lasted several years. Thus, property restitution once again resonated in the public discourse at the time of the presidential elections.

During a televised presidential debate mentioned above, Zeman asked Schwarzenberg to confirm a statement he had previously made to the effect that the Czech state should give the Sudeten [ethnic] Germans back their property and Czech citizenship. Schwarzenberg replied without confirming or denying such a statement, saying that "what we did in [19]45 [i.e. the expulsion of ethnic Germans] would today be condemned as a serious violation of human rights and the government, including president Beneš, would be in The Hague [i.e.

<sup>1.</sup> Adolf Schwarzenberg was known for his anti-Nazi stance and support for the Czechoslovak government-in-exile. Due to his acts it was not possible to expropriate him on the same legal grounds as ethnic Germans and collaborators.

prosecuted by the Hague Tribunal]". Zeman swiftly replied that in that case Schwarzenberg considered one of the former presidents of Czechoslovakia to be a war criminal, and he was even more blunt in the debate that followed, saying that "...he who labels (...) a president of Czechoslovakia as a war criminal speaks as a 'sudeťák' [a pejorative term for an ethnic German] and not as a president".

After that debate, topics surrounding the Beneš decrees (the laws named after President Edvard Beneš, which provided the legal grounds for the expulsion of ethnic Germans and confiscation of their property) and property restitution escalated in the media and public discourse. The anti-Schwarzenberg campaign presented Schwarzenberg's statement as treason in regard to Czech national interests and as a threat to the present-day owners of confiscated German property. This interpretation of Schwarzenberg's statement may be considered manipulative as there was no legal grounds for any such restitutions to ethnic Germans, and nowadays Czech presidents have only limited executive power and cannot influence restitution schemes. However, the threat may have appeared real to the owners of properties confiscated from expelled Germans as a major restitution scheme had only just been approved and Schwarzenberg himself could have benefited from changing the property restitution laws.

#### 2.1.2 Data and Methodology

Our dataset is based on administrative electoral records and includes 6,160 municipalities for which we observe voting outcomes in two rounds of the presidential election. We augment this dataset with a treatment variable (T): the share of voters at risk of losing property under a hypothetical restitution of property confiscated under the Beneš decrees.<sup>2</sup> The sample includes 98.4% municipalities with 99.7% eligible voters because data from the 1930 census, used in the construction of the treatment variable, are missing for some municipalities.

Figure 2.1 shows the geographic distribution of voters at risk. Municipalities with the most voters at risk are in regions near the German and Austrian borders—in what is known as the Sudetenland, where ethnic Germans had lived before World War II. Comparison with Figure 1.1 shows that there is indeed a large overlap; however, 70 years of resettlement and urbanization processes have resulted in considerable variation between our treatment variable and the share of ethnic Germans in 1930 (see Figure 2.2).

The two round election, with the treatment occurring between rounds, enables us to use a difference-in-differences framework. Figure 2.1 also suggests that spatial auto-correlation

<sup>2.</sup> The treatment variable is defined as  $T_i = G_{(i,1930)} \times P_{i,2013}$ , where  $G_{(i,1930)}$  measures the share of ethnic Germans residing in the municipality in 1930 and  $P_i$  is the share of homeowners residing in houses built before World War II in the adult population in 2013.



Figure 2.1: Share of voters at risk.

Source: CZSO, own calculations.

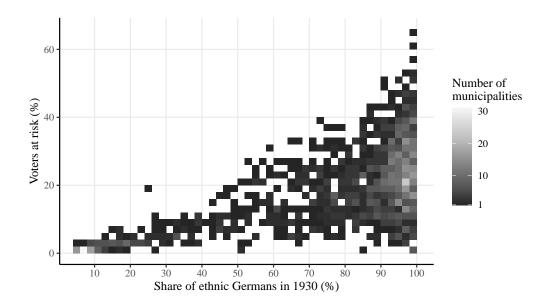


Figure 2.2: Municipalities by the share of voters at risk and ethnic Germans in 1930 Source: Own elaboration, Note: The figure shows only municipalities with at least 5% of ethnic Germans in 1930 (1,425 municipalities).

in the error term might be an issue. Therefore we opt for the spatial error model (SEM):

$$v_{ir} = \beta R_r + \gamma T_i R_r + \theta_i + u_{ir}$$
 (2.1)

$$u_{ir} = \lambda \mathbf{W} u_{ir} + \varepsilon_{ir} \tag{2.2}$$

where i indicates municipality and r the election round. The dependent variable  $v_{ir}$  is the electoral outcome (support for each of the presidential candidates defined as shares of votes cast by eligible voters and voter turnout),  $T_i$  is the treatment variable defined above,  $R_r$  is an indicator variable of the second round, and  $\theta_i$  is a full set of municipality fixed effects that remove time-invariant effects, including those referring to geography, culture, and economic development. The key parameter of our analysis is  $\gamma$ , which identifies the effect of the political campaign on the election results in the second round. Spatial auto-correlation in the error term u is modelled in Equation (2.2), where  $\mathbf{W}$  is a row standardized spatial contiguity weight matrix with individual nonzero weights for neighbouring municipalities, and  $\varepsilon$  is a well-behaved error term.

#### 2.1.3 Results

Our analysis confirms that the manipulative campaign based on Schwarzenberg's statement significantly affected the electoral outcomes. Estimates of the system of Equations (2.1) and (2.2) imply that in a municipality with 7.5% of voters at risk (mean value), support for Schwarzenberg declined by 0.6 percentage points ( $\gamma = -0.08$ ), and support for Zeman increased by 0.4 percentage points ( $\gamma = 0.05$ ). The positive effect on voter turnout ( $\gamma = 0.04$ ) points to the political activation of citizens in municipalities with a higher potential threat to housing ownership.

This estimated effect of the spread of manipulative information is small relative to the victory margin. Using the estimates from our preferred specification we estimate that the campaign accounted for 8% of the difference in votes in the run-off election and helped Zeman to get elected.<sup>3</sup> The expulsion of ethnic Germans from Czechoslovakia in 1945–46 remains a sensitive topic in the public discourse. In this paper, we confirm that the political campaign influenced the electoral outcomes and increased voter turnout in municipalities where voters were threatened by a hypothetical return of expropriated property to expelled Germans and their heirs.

#### 2.1.4 Future research opportunities

Guzi and Mikula (2021) focuses on only one mechanism through which the disinformation campaign could have affected voting behaviour. Future research should address other likely channels: levels of nationalism and Karel Schwarzenberg's particular status given by his ancestry.

The robustness checks presented in the paper dismiss the possibility that the effect identified could have been driven by nationalism rather than the perceived risk of property restitution. However, the effect of nationalism *per se* remains unidentified.

As a descendant of a major European Noble House, Karel Schwarzenberg holds a special position in the Schwarzenberg family's former domains in South Bohemia. Future research should examine whether memories of the once popular noble house could drive voting behaviour for decades.

<sup>3.</sup> The effect of the campaign is calculated for each municipality and summed together as follows:  $\sum_c |\sum_i \gamma_c \times T_i \times V_i|$ , where  $\gamma_c$  is the estimated effect on support for candidate c,  $V_i$  is the number of eligible voters in the run-off and  $T_i$  is treatment intensity in the municipality i.

## Chapter 3

### **Authorship contribution statements**

The authors are listed in alphabetical order. Signed contribution statements are included in the habilitation file.

## The long-term impact of the resettlement of the Sudetenland on residential migration (Guzi et al. 2021)

• Corresponding author: Štěpán Mikula

• Conceptualization: Martin Guzi, Peter Huber, Štěpán Mikula

• Methodology: Peter Huber, Štěpán Mikula

• Software: Štěpán Mikula

• Data curation: Štěpán Mikula

• Data analysis: Štěpán Mikula

• Writing (original draft): Martin Guzi, Peter Huber, Štěpán Mikula

• Writing (review): Peter Huber, Štěpán Mikula

## Social capital and willingness to migrate in post-communist countries (Huber and Mikula 2019)

• Corresponding author: Peter Huber

• Conceptualization: Peter Huber, Štěpán Mikula

• Methodology: Peter Huber, Štěpán Mikula

• Software: Štěpán Mikula

• Data curation: Štěpán Mikula

• Data analysis: Štěpán Mikula

• Writing (original draft): Peter Huber

• Writing (review): Peter Huber

## Careful what you say: The effect of manipulative information on the 2013 Czech presidential run-off election (Guzi and Mikula 2021)

• Corresponding author: Štěpán Mikula

• Conceptualization: Martin Guzi, Štěpán Mikula

• Methodology: Martin Guzi, Štěpán Mikula

• Software: Štěpán Mikula

• Data curation: Štěpán Mikula

• Data analysis: Štěpán Mikula

• Writing (original draft): Martin Guzi, Štěpán Mikula

• Writing (review): Martin Guzi, Štěpán Mikula

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