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# Emigration in Bosnia and Herzegovina: Empirical Evidence from the Last Two Decades

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*In this study, we empirically analyse intentions to emigrate from Bosnia and Herzegovina (BiH), focusing on individual, household, regional and socio-economic determinants, including specific influences relevant to the post-conflict nature of this society. We rely on a series of annual country-representative survey data collected over the period 2006–2010 and the latest repeated survey from 2019. This gives us the possibility to see whether there are changes in observed determinants with a decade's difference, all investigated through non-linear econometric models. Moreover, we supplement quantitative research with qualitative in-depth interviews to enrich our results with deeper insights collected from both emigrants and potential emigrants in BiH. Our findings indicate that higher intentions to emigrate are linked to typical individual and household conditions: young, educated and low-income respondents all report high intentions to do so. However, the socio-economic environment characterised by economic – and, even more, by political – instability increases these intentions considerably. Our comparative analysis reports that the socio-economic environment has taken primacy over individual characteristics as drivers of emigrations which dominated a decade ago. Conventional thinking that economic drivers of emigration intentions dominate nowadays have not been confirmed. Policymakers should focus on improving primarily political stability as a measure that will decrease emigration intentions in this post-conflict society.*

**Keywords:** *emigration intentions, emigration driver, survey data, Bosnia and Herzegovina*

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## Introduction

People have been moving throughout human history. The main driver of migration is often linked to the search for better living conditions, which have been associated with economic, political, security, environmental and other determinants. This paper is focused on Bosnia and Herzegovina, which is a post-conflict and emigration country; however, in the recent past, it has also been a transit country for international migration to the European Union. Contemporary migration in BiH can be categorised into three waves. First, when BiH was part of the Former Yugoslavia (1945–1990), economic reasons – driven by the increasing demand for labour force by developed European economies – supported the emigration of a productive labour force. Second, during the Bosnian war (1992–1995), one quarter of the population was mostly forced to move out of the country (IASCI/IOM 2010), making BiH's diaspora one of the largest in Europe today. The third, post-conflict, period can be observed after 2000. This period was mostly associated with an unfavourable socio-economic situation, which is combined with other post-conflict-related challenges. However, emigration intensified in the second decade of the twenty-first century (after 2015) and has been associated with significant labour migration, in particular of the younger and more-educated labour force (Efendic 2021).

Linked to these emigration flows, the purpose of this article is to uncover determinants that support the very high emigration intentions that exist nowadays in Bosnian society. As this country faces post-conflict, socio-economic and institutionally related challenges, including quite high unemployment and a low standard of living, we are particularly interested in examining what the most influential forces of emigration intentions and real emigration are – conventional economic or, probably, factors more linked to the post-conflict nature of this society.

The study uses a mixed-method approach based on primary data which were collected through representative surveys and qualitative interviews with target groups. Firstly, we use econometric analysis and quantitative survey data to replicate the emigration intention model conducted for the period 2006–2010 with 2019 data, which gives us possibility to come up with comparative perspectives on emigration intentions over the last decade. Additionally, we rely on a qualitative methodology based on a series of in-depth interviews from 2019 to gain a deeper understanding of the reasons and motivations for emigration intentions.

Emigration intentions are the best predictors of future emigration because they provide insights into the factors influencing the move before it occurs and before emigrants are lost in statistical records. The data in this study allow for a representative analysis of the phenomenon, so the most interesting indicators are observed, the potential determinants of emigration intentions are discussed and, importantly, the research is designed to report empirical outcomes from both quantitative and qualitative analysis. The overall finding is that, currently, high emigration intentions are very much supported by an unstable socio-economic environment and especially political instability while, a decade ago, individual factors were stronger in their influence on aspirations to leave the country. This sends a strong signal to the policymakers in this country.

The paper is organised as follows. In the next section, we present a standard literature review and organise it around the determinants examined in the empirical section. Next, we introduce the context of emigration in BiH, the data and key descriptive statistics. The penultimate section reports on our empirical analysis and discusses the results and limitations of the study. Then comes the conclusion.

## Literature review

International migration is a complex, dynamic and multidimensional phenomenon involving a whole range of different motives for emigration, often based on the subjective assessments of individuals who wanted to leave the home country, either temporarily or permanently (Borozan 2014). This is a phenomenon that can be

approached from several angles due to the fact that migration brings uncertain outcomes for society but also for the individual who wants to emigrate. Decisions for long-term emigration also affect the immediate environment of migrants, such as their family and friends, as well as future generations growing up outside their country of origin, often in social and economic systems that are culturally different from those in their country of origin.

Given the complex nature of migration, it is difficult to identify the general causes and consequences of emigration as distinct from other socio-economic and political processes with which migration is closely related (Zbinden, Dahinden and Efendic 2016). It is also important to note that migration is perceived as a uniquely individual experience. Massey *et al.* (1993) identify a set of partial theories and models of migration and point out that, currently, there is no integrated theory of international migration that would unite all significant direct and indirect indicators related to this phenomenon. De Haas (2010) believes that a general theory of migration, due to its complexity, is unlikely to be scientifically achieved.

Although the likelihood of emigration is largely determined by the intention to emigrate, migration intentions have been largely ignored in previous neoclassical structural models (de Haas 2010) because researchers relied on the individual's actual migration activities, predicting the future behaviour of potential migrants based on historical data but not on expressed intentions (Manski 1990). Thus, this approach has ignored the study of potential migrant profiles before the actual migration, while more-recent research has included migration intentions in models that have identified aspirations as good predictors of future migration and migrant behaviour (e.g. Čičić *et al.* 2019; Creighton 2013; Efendic 2016; van Dalen and Henkens 2013). Many authors agree that intentions to emigrate are the primary predictor of actual migrations that are recorded at a later stage (e.g. Ajzen 1985; Armitage and Conner 2001; Creighton 2013; de Jong 2000; Dustmann 2003; Lu 1998; Simmons 1985; van Dalen and Henkens 2013). In this respect, the analysis of emigration intentions is very important for scientific and policy purposes.

Loschmann and Siegel (2013) argue that the analysis of emigration intentions has an advantage over historical data on emigration, bearing in mind that motives and intentions give a better structural understanding of reasons for emigration and inform migration policies which could be better activated before emigration (Simmons 1985). Such policies might indeed be important as emigration can change the population structure of a society (van Dalen, Groenewold and Schoorl 2005) and also indirectly influence the education system, labour market and overall socio-economic activity in the society.

Migration decisions are very often linked to individual (Bahna 2008) and personal characteristics (Berry 2001). Many authors identify different individual causes which motivate intentions and migrations; these determinants mostly include age, gender, level of education and marital status (Brockerhoff and Hongsook 1993). A number of researchers report that age is the most frequently identified determinant of migration that systematically affects emigration intentions (e.g. Kennan and Walker 2011; van Dalen *et al.* 2005). Put simply, the conventional finding is that younger individuals are more likely to intend to emigrate and to do so. This effect is not isolated but, very often, interacts with other individual, household and societal influences. For example, van Dalen and Henkens (2008) find that emigration intentions are much higher among young individuals in good health. Gibson and McKenzie (2011) argue that the perception of local labour-market conditions is the key trigger of youth migration. If individuals are young, unemployed and educated, there is a higher incentive for emigration abroad (Kennan and Walker 2011; van Dalen *et al.* 2005). Bosnia and Herzegovina are characterised by high unemployment which, according to the International Labour Organization (ILO), was around 16 per cent in 2019 (SEEJGD 2019) but much higher for younger respondents. Apparently, youth unemployment can be a fertile ground for increasing intentions to emigrate to societies with better prospects for employment and living.

A very popular phenomenon in the literature is the migration of the qualified labour force. More-educated, -skilled and -qualified individuals typically show stronger desires for emigration in comparison to the less-educated and less-qualified (Akee 2010; Duval and Wolff 2016; Gibson and McKenzie 2011). The main argument for this difference is that more-qualified individuals have a higher probability of finding better-paid jobs abroad (Haug 2008). Thissen *et al.* (2010) have found that highly educated individuals have a stronger intention to leave the country, which can cause the well-known problem of brain drain. However, the education of individuals for migration purposes that are not realised can sometimes lead to brain gain within the country, although this is hard to quantify (Abdullov, Epstein and Gang 2020).

Among the important individual characteristics that affect migration intentions, we can include marital status. Krieger (2004) found that individuals who are not married and are without partners make decisions to migrate more easily. In line with this, larger families typically develop strong ties with children and spouses, which limit their migration intentions. However, larger families can involve more people in potential migration – sometimes even whole communities migrate through ‘chain migrations’, as was the case with the war- and post-war-related migration from BiH (Halilovich 2012, 2013a, 2013b). In their search for better migration prospects, some individuals use family migration ties as a strategy to improve their migration outcomes (Halilovich 2012; Haug 2008) and also migration capital in terms of migration networks (Halilovich 2013b), which can be important in understanding current and future migration (Ivlevs and King 2012). Generally speaking, more social capital in the form of informal migration networks stimulates migration intentions (Haug 2008). In line with this, individuals with previous migration experience often have stronger migration aspirations than the non-migrant population, which is why the conflict- and post-conflict-related migrations in BiH could be important in understanding today’s intentions to migrate. To acknowledge this, during the war over 50 per cent of the population in BiH migrated either internally or externally (MHRRBiH 2016) and this effect should be part of the empirical models that follow.

Most of the migration theories today are based on the idea that emigration is motivated by a desire of individuals to improve their standard of living (Todaro 1996; van Dalen and Henkens 2008) or the welfare of their families (Friebel, Gallego and Mendola 2013). This is very important for transition societies that can barely compete with developed economic systems. Accordingly, many authors see economic determinants as primary factors affecting migration (Bahna 2008; Caragliu *et al.* 2013; Ravenstein 1885; Thissen *et al.* 2010) or determinants that often surpass other influences in their importance (Constantinou and Diamantides 1985; Haug 2008). However, other related factors, such as personal life satisfaction and the perception of one’s own economic situation, can be important in their impact on individual decisions to migrate. Individual economic influences are the most often observed through the level of personal income (Loschmann and Siegel 2013; Lovo 2014) or family income (van Dalen and Henkens 2013; Yang 2000) and are mostly identified as relevant predictors. The direction of influence is that a lower level of income is frequently found to be associated as a trigger of migration. However, migration is costly and some financial minimum is required, which means that the level of income and its direction should be treated with caution and examined in specific contexts, which we do in our study. Indeed, the only prior empirical research on emigration intentions in BiH (Efendic 2016) implies that higher aspirations for migration over the period 2006–2010 are associated with the weaker economic performance of individuals. Interestingly, unemployment status in this study did not affect aspirations to a significant extent. Overall, this research found that the economic status of individuals affected aspirations for migration a decade ago (Efendic 2016).

After migration, emigrants can support the population in the home country in different ways – both directly and indirectly – although the most often is by using the social and financial capital which they gain abroad. Remittances from abroad, investments and access to capital are treated as the most important financial influences on the domestic economy (Efendic, Babić and Rebmann 2014). Remittances are a measurable

financial instrument emanating from international migrants and they present an important external financial source for individuals, families and even societies. Although remittances can be invested in the home country, they often end up covering daily consumption (Nielsen and Riddle 2009), which is precisely the case in BiH, where over 80 per cent of remittances end up financing everyday needs (Efendic *et al.* 2014). Several studies have found that the distribution of this financial source has a positive effect on reducing poverty in BiH (Adams and Page 2003; McKenzie and Rapoport 2010) but remittances also serve to keep strong ties with family members (Lucas and Stark 1985; Stark and Bloom 1985). However, remittances can also be seen as an indicator of the good opportunities that exist abroad; thus, they can motivate the domestic population to leave the country. Garip and Asad (2015) indeed identify that remittances can be used as a financial support that helps potential migrants in their future emigration. This is why it is important for emigration and remittances to be controlled in BiH's context, as the level of remittances to this country is close to 10 per cent of the gross domestic production annually (CBBiH 2020).

The literature recognises that migrants and non-migrants have different risk-aversion profiles (Goldbach and Schlüter 2018), which is consistent with individual-level theories of migration decisions (Huber and Nowotny 2020). In other words, an individual's attitude towards risk and willingness to engage in risky activities determine both emigration intention and behaviour. In this regard, Huber and Nowotny (2020) empirically confirm that risk aversion has a strong and statistically significant negative effect on both domestic and international migration willingness, positing that the strength of the impact also depends on the riskiness of the country because people who are not prone to risk do not like to live in a risky environment. Simply put, risk-averse individuals are less likely to emigrate (Heitmueller 2005), which is the effect that we aim to check in our models.

The post-conflict period in BiH is marked by a low level of trust in public institutions (Efendic and Pugh 2015), which might negatively affect aspirations for emigration from this society. Generally said, post-conflict societies are often characterised by inefficient formal institutions which do not align with informal practices and rules on the ground; in such interaction, institutions do not adequately support economic development (Williams and Vorley 2017). Formal institutions, with their bureaucracy and high transaction costs, increase the total costs of living and risk for entrepreneurs (Tonoyan *et al.* 2010), motivating the more informal activities that are associated with a weak economic system and high incidence of the informal economy – Pasovic and Efendic (2018) estimate it at around 30 per cent of GDP. Consequently, it is important to investigate how perceived levels of institutional efficiency might affect aspirations for emigration in BiH.

As we have already pointed out, post-conflict societies are characterised by a number of social and economic challenges, including slow economic activity, political instability and institutional inefficiency, all of which might influence emigration intentions. Indeed, Constantinou and Diamantides (1985) found that not only the economic but also the political environment are potential factors that affect emigration intentions. In BiH, the general public's perception of the political situation is that this is an unstable political environment causing insecurity, political fragmentation and a lack of future prospects, thus increasing intentions for emigration in BiH (Efendic 2016; Williams and Efendic 2019).

Ethnically related challenges are among the potentially important post-conflict influences on emigration aspirations in BiH, as the Bosnian war structurally changed the local ethnic composition of the country and the level of ethnic tolerance among the different ethnic groups (Efendic and Pugh 2018). For example, Duval and Wolff (2016) argue that ethnic discrimination stimulates the emigration intentions of the Roma population in Central and Southeast Europe. Similarly, Docquier and Rapoport (2003) find that ethnic-minority groups can have stronger aspirations for emigration than the ethnic majority group. This can be especially the case when ethnic minorities are institutionally discriminated against – as in BiH (Efendic, Pugh and Adnett 2011)

– and it is more likely that such individuals or groups have stronger aspirations to leave the country. This is somewhat country-specific to BiH and will be taken into account in our empirical modelling.

Our literature review recognises the importance of the analysis of emigration intentions for the post-conflict context of Bosnia and Herzegovina, as well as the key emigration drivers that are important to observe. As we have pointed out, there is no unique theory of migration nor a unique list of potentially important drivers for further elaboration but, rather, analysis is usually linked to the existing and available data. However, our literature review establishes grounds for all emigration drivers that will be examined in the empirical model used to analyse emigration intentions in BiH. Next, we introduce the BiH context and the available data.

### **Emigration from Bosnia and Herzegovina**

According to World Bank (2017) estimates, the total emigration stock from BiH was 44.5 per cent of the resident population, which placed the country sixteenth in the world out of 214 countries. According to the Ministry of Human Rights and Refugees of BiH (MSBiH 2020), the diaspora of BiH was even larger and accounted for over half of the country's current population, which included migrants from the distinct phases of migration introduced earlier. No matter what we accept as a more accurate estimate, the size of the Bosnian diaspora today is significantly large. Most emigrant stocks from BiH are found in Croatia and Serbia within the region, as well as in Germany and Austria within the EU and in Switzerland (Efendic, Kovac and Shapiro 2022).

The size of the emigration stock from BiH is likely to be even more prominent in the future. Emigration from BiH has intensified over the past decade (2010–2020) and, in particular, over the last few years (Leitner 2021). This has contributed to a negative population growth rate, leading to a decrease in the number of citizens. Many estimates (e.g. ASBiH 2018) suggest that the country's population nowadays could be less than 3 million while the last pre-war census recorded 4.1 million citizens.

The recent Eurostat statistics of residence permits within the EU show the increasing popularity of new EU member states in the current emigration flows from BiH, as well as the continuing importance of some old member states such as Germany. The total number of persons from BiH who received a residence permit in 32 European countries in 2018 is 54,107, while the total number for the past 10 years is 228,230 persons. The largest numbers of permits for BiH citizens were issued in Germany, Croatia, Slovenia and Austria. A significant increase in the number of persons who received a residence permit is evident. Thus, in 2018, 45 per cent more BiH residents received a residence permit in another country compared to 2017 – and, even then, there was an increase of 37 per cent compared to 2016. Out of the total number of residence permits, most were issued for a period of 12 months and more (31 048), while 19,544 permits were issued for a period of 6 to 11 months and 3,512 for 3 to 5 months. This should also be considered because there are circular migrations – i.e. workers who spend several months a year in another country for education or work. These workers or students are an extremely valuable resource because they bring back their knowledge, experience and money earned to BiH – in other words, they are the bearers of human and financial capital.

The data on emigration from BiH, although scarce, still indicate that this country faces the huge challenge of the continuously reducing size of its population, its shrinking labour force and other related socio-economic issues. The high number of intentions to emigrate recorded in 2019, as discussed in the next section, suggests that emigration will continue to be significant in the near future, which stimulates a deeper investigation of emigration intentions in this society.

## Methodology

The paper employs a mixed-methods approach, which adds depth and richness to the analysis by combining quantitative data (survey) with qualitative (semi-structured interviews) insights from the target groups, allowing for a more comprehensive understanding of the reasons and motivations behind emigration intentions. This study uses primary data collected in BiH by professional research agencies, which followed the standards of a representative sample of the adult population. For the period up to 2010, we use UNDP survey data from the household sector in BiH. A series of quarterly surveys were conducted by a professional survey agency to support the UNDP BiH project ‘Early Warning System’ over the period from 2002 to 2010 (UNDP BiH 2000–2010). Thirty waves of data were collected and our effective sample comprises around 40,000 observations. In addition, we use a repeated representative survey from 2019 with a sample of 2,028 respondents, which was organised by the Academy of Science and Arts of BiH and again implemented by a professional research agency.<sup>1</sup> As both surveys included the same questions relevant for our analysis, we are able to investigate emigration intentions for these distinct periods as well as examine similarities and differences with a decadal difference.

In addition, we conducted qualitative in-depth interviews with a select group of individuals to gain insight into the reasons, motivations and actual experiences of BiH citizens with regard to emigration intentions and actual emigration. The sample was designed to include people from industries that are heavily impacted by emigration, such as IT and healthcare. Additionally, efforts were made to ensure that individuals from various regions, educational backgrounds, age groups and employment statuses, including those currently living abroad and returnees, were represented. The interviews were conducted in person with the help of an unstructured questionnaire, and the data were analysed descriptively by experienced researchers. A total of 13 people were interviewed, with codes ranging from I\_1 to I\_13. Nine of the participants were BiH residents and four were actual emigrants interviewed during their visit to BiH. The interviews were conducted in July 2019 and the narratives were recorded, transcribed and then analysed using a thematic analysis approach.

## Emigration intentions: data and descriptive statistics

The primary goal of this study is to examine the emigration aspirations of BiH’s citizens or their intention to leave the country, either temporarily or permanently. In response to this question, the majority of respondents, 34 per cent, said they would leave BiH permanently and move to another country, 24 per cent would temporarily leave BiH, while 22 per cent have no plans to emigrate; others do not know or want to answer. According to the UNDP BiH (2002–2010), on average, approximately 45 per cent of respondents expressed a readiness for permanent migration abroad during this period. Thus, our research shows that, nearly a decade later, the intention to emigrate permanently is slightly lower. As previous surveys did not ask about temporary emigration, we focus on the category of respondents who want to emigrate permanently.

Looking at other responses from this survey (Čičić *et al.* 2019), a slightly higher percentage of men expressed an intention to leave – 35 per cent compared to 32 per cent of women. Interestingly, 39 per cent of respondents with a university degree expressed an intention to leave BiH permanently, while 33 per cent of respondents with a high-school diploma have the same intention. Most respondents who intend to leave BiH permanently are in the age group 30 to 39 (44 per cent), while 40 per cent of those aged 18 to 29 also have emigration aspirations. As expected, the oldest age group has the lowest percentage.

Those (58 per cent) who expressed a desire to leave BiH either permanently or temporarily responded to the survey question about which country they would like to live in. The majority of respondents chose Germany (42 per cent). Other countries of interest to respondents include Austria (12), Switzerland (8) and Sweden (7 per cent).

After the introduction of the data in Table 1, we report the descriptive statistics for variables used in empirical modelling; the empirical analysis based on these data follows.

**Table 1. Descriptive statistics of variables used in empirical analysis**

Variable	Description	Observed	Mean	Std Dev.	Min.	Max.
<i>Individual and household characteristics</i>						
Age	1=>35 years, 0=35+	2,028	0.438	0.496	0	1
Gender	1=male, 0=female	2,028	0.404	0.491	0	1
Education	1=higher education, 0=middle or low	2,028	0.415	0.493	0	1
Employment	1=employed, 0=other	2,028	0.570	0.495	0	1
Area of living	1=rural, 0=urban	2,028	0.449	0.497	0	1
Level of family income	1=below average, 0=average or above	2,028	0.181	0.385	0	1
Marital status	1=married, 0=no	2,002	0.601	0.490	0	1
Risk aversion	1=risk averse, 0=not willing to take risks	2,028	0.732	0.443	0	1
Remittances	1=receive remittances, 0=no remittances	1,944	0.236	0.425	0	1
<i>Socio-economic determinants</i>						
Economic situation	1 = worse, 0 = better	2,028	0.483	0.500	0	1
Political situation	1 = worse, 0 = better	2,028	0.541	0.498	0	1
Institutional quality	1 = worse, 0 = better	2,028	2.352	0.728	1	5
<i>Post-conflict determinants</i>						
Ethnic tensions	1=exist, 0=do not exist	2,028	0.058	0.233	0	1
Returnees	1=returnees, 0=other	2,028	0.047	0.212	0	1
Internal migrants	1=internal migrants, 0=other	2,028	0.173	0.378	0	1
Refugees	1=refugees, 0=other	2,028	0.011	0.104	0	1

*Note:* we do not report descriptive statistics for 'do not know' responses or regional and municipal dummies for space reasons but they are controlled for in the empirical models.

### Aspirations for emigration in BiH – an empirical analysis

Our empirical analysis was conducted in two stages.<sup>2</sup> The first step was to replicate the emigration intentions model from Efendic (2016), the model which was estimated for the period 2006–2010 (i.e. Model I) in order to identify potential changes in comparison to the latest data (i.e., 2019 vs 2006–2010). It is interesting to estimate the same model with a time difference of 1 decade: this is Model II.

The second step was to estimate an extended model with additional factors identified in the literature review as potentially relevant or specific to BiH. This is Model III. All these models are based on determinants which, in line with our previous discussion, can be categorised into individual influences, societal and post-conflict-related influences.<sup>3</sup> Table 2 reports a comparative presentation of these 3 different models estimated for different periods and with varying specifications.

To make interpretation easier, the majority of variables are set up as binaries, including the dependent variable. The models are estimated using the non-linear probit model in the first stage (as the dependent variable is expressed in binary form), while marginal effects are calculated after the probit estimate and reported in Table 2.

**Table 2. Emigration aspiration models: marginal effects after probit estimate**

Dependent variable (1=aspirations to permanently leave BiH, 0=other)		Initial model 2006–2010 data		Replicated Model I with 2019 data		Final model 2019 data	
		Model I	Model II	Model I	Model II	Model III	Model III
Variable	Description of variables	y/dx	> z	y/dx	> z	y/dx	> z
<i>Individual and household characteristics</i>							
Age	1=>35 years; 0=35+	0.34	0.000	0.16	0.000	0.17	0.000
Gender	1=male, 0=female	0.01	0.200	0.01	0.907	0.24	0.405
Education	1=higher education, 0=middle/low	0.20	0.000	0.08	0.020	0.05	0.126
Employment	1=employed, 0=other	0.04	0.003	0.03	0.370	0.05	0.111
Area of living	1=rural, 0=urban	0.01	0.652	0.06	0.118	0.05	0.090
Level of income	1=below average, 0=average/above	0.08	0.000	0.01	0.865	0.03	0.465
Marital status	1=married, 0=not married	-	-	-	-	0.02	0.548
Risk aversion	1=risk averse, 0=not risk averse	-	-	-	-	0.06	0.082
Remittances	1=receives remittances, 0=does not	-	-	-	-	0.11	0.001
<i>Socio-economic determinants</i>							
Economic situation	1=worse, 0=better	0.03	0.028	0.14	0.001	0.13	0.001
Political situation	1=worse, 0=better	0.06	0.000	0.26	0.000	0.19	0.000
Institutional quality	1 minimum to 5 maximum	-	-	-	-	0.13	0.000
<i>Post-conflict determinants</i>							
Ethnic tensions	1=exist, 0=do not exist	0.01	0.793	0.18	0.006	0.04	0.539
Returnees	1=returnees, 0=other	0.01	0.662	0.06	0.481	0.04	0.603
Internal migrants	1=internal migrants, 0=other	0.13	0.000	0.08	0.071	0.04	0.307
Refugees	1=refugees, 0=other	0.09	0.000	0.23	0.114	0.26	0.022
<i>Number of observations</i>		12,165		1,110		1,506	
<i>Period in focus</i>		2006–2010		2019		2019	
<i>Regional dummies (18 regions controlled)</i>		Yes		Yes		Yes	
<i>Municipal dummies (200 municipalities controlled)</i>		Yes		No		No/Yes	
<i>'I don't know' included in the analysis</i>		Yes		Yes		Yes	
<i>Estimated probability</i>		0.47		0.44		0.44	

Notes: we do not report probit coefficients as they are not useful for interpretation, which we tackle by estimating marginal effects after probit estimates in Stata 14 software. Marginal effects for regions and 'do not know' responses are not reported for reasons of space. Municipal dummies are included in Model III to check consistency in the results; the probit model provides a very similar estimate without changes in significant variables and with a very similar magnitude. However, the software could not calculate marginal effects.

If we examine the first category of influence on emigration intentions (respondents who intend to leave BiH permanently), which we refer to as individual characteristics, we observe a number of interesting outcomes. First, although the age of the respondents is the strongest individual predictor of emigration intentions in both estimated models (Model I and Model II), the effect was reduced from 34 to 16 per cent. In sum, although younger respondents show stronger emigration aspirations, for 16 per cent in comparison to older respondents (35+ years), this effect is twice as weak as a decade earlier.

Another similar change is identified in the analysis of the effect of respondents' education, where the probability of expressing the intent to emigrate decreases from 20 to 8 per cent for those with higher levels of education compared to those with lower levels. The potential brain-drain effect was significantly greater a decade ago than it is today, indicating that the effect of differences in individual education on emigration intentions has decreased significantly, although it is still somewhat skewed in favour of more-educated BiH citizens.

Another intriguing finding relates to the employment status effect. In Model I, employed individuals indicated somewhat weaker intentions to leave the country compared to other categories of the labour force. However, in 2019, there was no difference on this basis. Therefore, the conventional assumption that unemployed individuals in BiH leave or want to leave the country systematically more has not been confirmed, as employed individuals have comparable intentions. A similar finding provides insight into the effect of family income which, a decade ago, led to approximately 8 per cent stronger intentions to leave the country among those coming from families with lower incomes. In 2019, this difference disappeared, indicating that this economic factor does not influence individuals' desire to leave the country in a systematic manner.

In the subsequent categorisation of determinants, the socio-economic environment is as significant in elucidating emigration intentions as it was in the preceding decade, albeit with a structural upward shift. From 2006–2010, the perception of an unfavourable political and economic situation increased by 3 and 6 percentage points, respectively, to 14 and 26 percentage points in 2019. In the current study, the increased negative impact of the socio-economic environment is 4 times greater than it was a decade ago, indicating that perceptions of the socio-economic environment in BiH have significantly deteriorated. The findings suggest that the socio-economic environment has supplanted the influence of individual characteristics on the increased desire to emigrate over the past decade. Currently, the socio-economic environment has the greatest impact on potential migrants.

Such results are not only a significant indicator of how the general situation is perceived in the country but also a signal to policymakers that they must tailor their actions to specific groups. Political and economic instability, exemplified by a protracted period of political conflict, political uncertainty, the problem of non-government formation and, in conjunction with this, a lack of economic development, all increase the desire to leave BiH.

Within the observed set of post-conflict determinants, the significance of ethnic intolerance in 2019 stands out, in contrast to the initial model from a decade ago in which this determinant was not statistically significant. Specifically, respondents who have encountered ethnic-related problems are 18 per cent more likely to be considering leaving BiH. The possible origins of this type of discrimination must be investigated further, taking into account the effects of this social – but also very likely institutional – discrimination.

We decided to expand the replaced model (Model II) with the additionally potentially relevant determinants introduced in our literature review and, importantly, which are available in the 2019 dataset (although not before). In relation to our earlier discussion of whether the potential individual determinants cited by the literature were significant, we added to this group the marital status of respondents, their risk tolerance and whether or not they receive remittances from abroad. In the socio-economic determinants category, in addition to the perception of the economic and political environment, we also control the effect of the perception of the efficiency of public institutions in BiH, which has been shown in numerous studies to be instrumental in elucidating a variety of social phenomena. Our final and extended model (Model III), based on multiple factors

and simultaneously controlled influences drawn from recent literature, certainly increases the significance of the results obtained, which is the basis for our final interpretation of the empirical results.

Individual characteristics in the final model are insignificant in increasing emigration intentions in the majority of cases, apart from the effect of age and remittances, with the conventional finding being that younger respondents have approximately 17 per cent stronger emigration intentions than older respondents. Although the effect of age is important, we note that, in previous research, it was twice as high, which suggests that the elderly population's intentions to emigrate have been increasing. It is interesting to note that education, employment, gender and income do not influence emigration intentions systematically. If we divide the level of education into more categories – primary, secondary and higher education – respondents with secondary and higher education have approximately 20 per cent greater emigration aspirations than those with only primary education. This result is not unexpected (see Leitner 2021) and does not definitively confirm the existence of a brain-drain phenomenon.

It is worth noting that individuals who receive remittances have approximately 10 per cent greater emigration intentions, indicating that remittances may be a factor luring the population abroad, either due to the perception of higher living standards abroad or as a potential means of financing emigration. If we observe the significance at a weaker level (10 per cent) than the conventional 5 per cent level, we find that the effect of the urban population and the more risk-prone population increases emigration intentions by approximately 5 per cent in this scenario. On the basis of these findings, we conclude that more young people from urban areas, who are generally more risk-aware and especially if they receive remittances from abroad, express a stronger intention to leave the country in comparison to others.

All socio-economic factors that we monitor through the perception of the country's general economic, political and institutional (in)stability influence emigration intentions. Those who believe the economic situation is deteriorating are 13 per cent more likely to declare emigration intentions, while those who perceive political instability are 19 per cent more likely to do so. The perception of institutions' inefficiency increases emigration intentions by 13 per cent. This finding reflects the unstable political climate that characterised 2019, in which election results from the previous year cannot yet be implemented (at the time of writing) but a quite similar situation characterised the later period (2020–2022). The indicators obtained for socio-economic characteristics demonstrate a greater influence compared to individual characteristics, which can be interpreted as a sign of widespread discontent with the socio-economic environment in the country. These findings are entirely consistent with the initial findings presented earlier in this paper. In the final model, post-conflict determinants involving ethnic intolerance and categories of returnees and internal migrants lose statistical significance.

Individual influences as potential emigration drivers in BiH are less influential than the socio-economic environment as measured by political instability, perception of the economic situation and institutional efficiency, according to our empirical findings. Consequently, the primary conclusion of this empirical analysis is that potential emigrants in BiH are currently more affected by the country's environment, particularly the political climate, than by individual difficulties and influences. We believe that this finding can be taken as relevant to other similar fragile, unstable and post-conflict societies.

Further interesting results can be obtained by looking at the combined effects of different determinants in the model. Since it is possible to report a good number of combinations for different variables used and for the two observed samples, we are limited as to how much detail to go into in one paper. However, we do find confirmation (by using the Bonferroni adjusted method and STATA software for calculations) that the determinants of emigration intentions in the model do not work only singly but in different combinations as well. Moreover, we are sensitive to the issue of potential endogeneity in the model, considering the fact that these are cross-sectional data. Still, the biggest attention related to potential endogeneity might be that we use

education and income variables in the same specification, having in mind well-established theoretical and empirical arguments that education generally is an explanatory variable of individual income. However, in our case, income is a family-level variable, so we believe that this potential endogeneity problem is less of an issue. Still, we cannot be sure that endogeneity is tackled fully, which we acknowledge as a limitation of this paper.

### **Emigrations and intentions – in-depth analysis**

To gain a better understanding of the reasons and motivations for emigration intentions and the actual emigration of the citizens of BiH, we conducted in-depth interviews with a selected group of individuals. As some sectors of the economy are particularly affected by emigration (e.g. the IT and health sectors), the sample was designed to include such people. Moreover, an effort was made to include individuals from different regions, educational backgrounds, ages and employment statuses as well as those who currently live abroad and those who are returnees. The interviews were conducted in person with an unstructured questionnaire and analysed in a descriptive manner. In total, interviews were collected from 13 participants, who were coded in the range I\_1 to I\_13. In the sample, 9 individuals live in BiH, while 4 are actual emigrants who were interviewed during their visit to BiH. The interviews were executed in July 2019; they are recorded, transcribed and anonymised following standard academic practice. A description of the interviewees is available in Table 3 (Appendix 1).

Our analysis of responses coming from people who left BiH (actual emigrants) suggests that emigration was not always or primarily motivated by financial reasons. Specifically, respondents I\_12 and I\_13 left BiH with their families, where both spouses were employed with above-average incomes. Furthermore, a respondent (I\_11) who left BiH and now lives in the Czech Republic stated: ‘It is ironic that I left a very good job behind to come to another country and work for much less because it is safer everywhere except in Bosnia’. Young people, on the other hand, frequently decide to emigrate after completing part or all of their studies outside BiH. As an example, I\_11 again stated that she received a full scholarship for a Master’s programme at a prestigious university and that she planned to return to BiH after completing her studies. She continues, ‘Other options have opened up, which have kept me out of BiH for 7 years [...] I never intended to leave BiH forever, but I have always been a person who made decisions as opportunities arose, and this was one that could not be passed up’. Based on the responses from these interviewees, it is possible to conclude that the motivating factors for leaving, for both young people and entire families, are primarily related to a sense of security and perceptions of the future rather than finances.

It is interesting to note that only two people stated that they would never leave BiH – an employee of a state institution and a respondent who returned from the US after 17 years to live in BiH. However, most respondents do not have a fully expressed emigration intention – i.e. they are currently satisfied with life in BiH but do not want to rule out the possibility of leaving in the future. Personal and professional development through learning about new cultures and expanding personal and professional acquaintances is clearly motivating this group of respondents. ‘I am not actively thinking about leaving’ [respondent I\_2 says] ‘but if I received a business offer that I consider adequate, I would leave BiH. Leaving BiH appeals to me more in terms of new experiences, career development and learning than as a permanent departure, because it may be better somewhere else’. In this regard, younger respondents believe that more-developed countries provide better opportunities for future development, as evidenced by the following statement:

*I have a desire to leave BiH, because I believe that, in other countries, I have more opportunities for development, better education system, better offer when it comes to international companies, better living*

*environment and ultimately better economic and political situation and health system. Another reason is that living in one of the EU countries leads to a number of advantages, both business and private, for example better connections and more travel opportunities, which are a very important hobby for me personally. I used to live and study abroad for a year – half a year in Portugal and half a year in Spain on an international exchange. The reason for my return is to finish school in BiH and the reason why I did not continue to look for a job abroad is my family – i.e., my parents – and my current unwillingness to do so (I\_6).*

Finally, a number of respondents are explicit in their intention to leave BiH. Injustice, corruption, insecurity and the general political and social situation are the main reasons for wanting to leave. According to one interviewee,

*It has long been a public secret that the most important reference here is to be politically close to the governing structures. In addition, I feel completely insecure and unprotected in BiH. I do not trust our justice system. I consider it my obligation to protect my children from this system and I see no other way than to go to a more stable and secure country (I\_8).*

During the interviews, respondents were asked about their perceptions of BiH's current economic, political and social situations. Unemployment is, as expected, the most serious economic issue. Corruption, which, according to our respondents, prevents business ventures – both investment and entrepreneurship and finding employment – comes in second place in terms of number of comments. It seems that this is linked to a lack of faith in the system and previous disappointments. Respondent I\_13, who left BiH, is adamant in her stance: 'I think that there is no future in Bosnia, corruption is only spreading, the people are becoming more and more corrupt'.

On the other hand, not all of the interviewed individuals hold pessimistic views of the current economic climate. Thus, an entrepreneur from the western part of BiH cites economic conditions as the reason for his decision to stay in BiH and establish an information technology company. The young, promising electrical engineer believes that his work, dedication and education can contribute to the development of BiH and the country's economic prosperity. A high-school graduate expressed the same opinion regarding her personal contribution, which contributes to a positive atmosphere.

Regarding the perception of the economic situation in BiH, we can conclude that finding employment and the fear of unemployment, as well as the complicated system for accessing jobs, are the primary economic issues. None of the respondents, whether they left or stayed in BiH, cited higher earnings as a reason for their decision.

The political environment, according to our respondents, is in a worse state than the economic environment. Consequently, they state: 'It appears to me that the political situation is even worse than the economic situation' (I\_6) or 'The political situation is the worst' (I\_3). Instability and uncertainty are the most significant issues. Thus, this university professor states: 'I believe we live in an extremely unregulated society with a very weak legal and state system that [only] provides legal, educational, health and any other type of insecurity' (I\_9).

Several respondents claim that they do not follow the country's political situation at all because they feel powerless to do or contribute anything, that 'the same politicians are always elected' (I\_11) and that they are sick of hearing the same post-war rhetoric and to be constantly reminded of 'undefined fears of another war' (I\_12). Our respondents are people who have either left BiH or are in the category the most likely to leave (e.g. IT professionals, medical personnel, young and prospective high-school or university students, etc.) and their message is very clear. They want to focus on themselves, think about the future rather than the past and contribute to their own personal and professional development. They are clearly lucrative for the labour market

now – in their best and most productive years – and they want to work, create and be happy. Thus, pessimism in society, caused in part by the image of the constant departure of young people, as well as negative and frequently unverified populist statements in the media about hopelessness in BiH, create an environment in which young people do not have the opportunity to consider their future positively.

Summing up, our qualitative research shows that respondents who left BiH need to justify such a life decision to themselves and others. As one interviewee said, ‘I can only say that I’m sorry this had to happen and I’m sorry to see that everything down there is falling apart’ (I\_10). Another respondent outside BiH described her view of the reasons why people leave or do not return to BiH:

*In general, based on my own personal experience, I believe that young people leave and then settle elsewhere because they observe a different way of life, equal opportunities for all young people and an emphasis on quality and effort over one’s name, economic status and family ties. Life in Central Europe affords the chance to attend an exhibition, concert, play or another event in Vienna, Prague, Budapest or Bratislava... For a pitiful amount of money, it is astounding that a student can plan a weekend trip and fly to Spain for 50 euros, earn more than their parents at the age of 24 and live in a peaceful country while reading only negative news from BiH (I\_11).*

It is interesting to note that the view is very similar but quite the opposite – i.e. on life in BiH, a young returnee says:

*Every day, I encounter people’s scepticism about my choice of residence. The fact is that many young people want to leave and seek a better life elsewhere. I am glad to hear this because I believe they are undervalued in their home country, where they were born and raised. I agreed to do anything at first and gradually progressed [waitress in the hotel – reception – front office manager – director of operations]. However, college graduates want a job for which they are qualified and do not want to do anything else. The state is responsible for regulating both the education system and the labour market, especially in the public sector (I\_7).*

Our overall conclusion is that qualitative analysis supports the findings of the quantitative analysis in conveying the message that the socio-economic environment strongly influences emigration decisions and that individual challenges and economic problems are frequently of second-order importance.

## Conclusion

Bosnia and Herzegovina is experiencing a permanent demographic decline. In other words, mortality and emigration are more dominant than birth rates and immigration, resulting in overall depopulation and accelerating the ageing of the population as one of the foremost challenges facing the country’s contemporary society. In addition, our primary data from the 2019 representative sample show that 34 per cent of respondents have aspirations for permanent emigration from BiH and 24 per cent have aspirations for temporary emigration, indicating potential further depopulation in the near future. Moreover, as Halilovich *et al.* (2018) report, emigrants from BiH integrate very well into their host countries, creating new political identities, thus making it more difficult to contemplate return to BiH.

Intentions to emigrate from BiH are a complex social phenomenon influenced by a number of factors pertaining to individuals, the environment where they live and post-conflict societal challenges, as demonstrated by the empirical findings of this study. We were able to observe the desire to leave BiH in a dynamic context over a 10-year time period, which adds to the importance of this study. The results obtained

indicate that the relevance of individual factors as migration drivers (age, marital status, education, employment, etc.) pales in comparison to the influence of the socio-economic and, especially, the political environment. Although younger individuals have emigration intentions that are approximately 17 per cent stronger than those of older individuals, this result is not unexpected; however, in a dynamic context, this age effect has significantly diminished. On the other hand, perceptions of political instability, the poor economic situation in the country and institutional inefficiency are systematic and the strongest contributors to emigration intentions. This is consistent with previous research (e.g. Franc, Časni and Barišić 2019) which indicates that GDP in the immigration country and the unemployment rate in the home country are strong motivators for migration, especially among the younger generation. Similarly, Halilovich *et al.* (2018) conclude that a difficult economic situation and delays in successful labour-market transition are strong drivers for migration, especially for young people and – interestingly – for those over-educated who look for non-standard or better employment opportunities abroad.

The conclusions obtained from our quantitative analysis are confirmed by the qualitative side of our research. Our respondents observed that the inefficient institutional system in BiH (from education and health systems to their trust in public institutions and political elites) negatively impacts on their quality of life and, as a result, they choose to leave. Our informants believe that they are overburdened with too many socio-economic problems, negative attitudes and rhetoric that prevent them from focusing on themselves and their professional and personal development within the country; hence, an existing strategy for many seems to be emigration.

Previous analysis and research have clearly shown that urgent and systematic implementation of socio-economic and political reforms in BiH would reduce intentions to emigrate. Increasing economic prosperity, urgent political stabilisation and improved institutional efficiency would undoubtedly relax citizens and enable them to focus on their daily lives and their own perspectives within the country instead of feeding their emigration aspirations.

Several aspects of this study can be highlighted as significant contributions. First and foremost, an updated analysis of previous studies is provided, allowing for the examination of potential changes and trends in emigration intentions over time, as well as potential changes in the determinants that influence emigration intentions. The paper then employs a mixed-methods approach to add depth and richness to the analysis by providing both quantitative data and qualitative insights from the target groups, allowing for a more comprehensive understanding of the reasons and motivations for emigration intentions. Qualitative interviews add valuable perspectives on the current economic, political and social situation in Bosnia and Herzegovina, enriching the overall analysis.

The study has practical implications as well. Our research found that the deterioration of the socio-economic environment, combined with political instability, has a significant impact on people's desire to emigrate. This observation can help policy-makers to address the underlying causes of emigration and develop strategies to improve BiH's socio-economic and political conditions. Furthermore, the paper can help policy-makers to understand the factors that encourage emigration and the importance of addressing specific challenges. Based on our empirical findings, these specific challenges primarily relate to the socio-economic environment and political stability.

The main limitation of this study is that the findings are limited to Bosnia and Herzegovina and may not be directly applicable to other countries or regions. The results cannot be generalised because of the unique socio-economic and political conditions in BiH. Furthermore, the study focused on two time periods, 2006–2010 and 2019, which may not capture the full dynamics of emigration intentions over a longer time period. Finally, we did not explicitly consider the potential interactions among the determinants of emigration intentions due to reasons of space. In this regard, a limitation of our study is the cross-sectional nature of the data and limited possibility to address potential endogeneity, which is always a concern in this kind of research.

## Notes

1. Data collection was conducted by the professional research agency, VALICON, using a combination of face-to-face methods (1/3 of the questionnaire) and CAPI or Computer-Assisted Personal Interviewing (2/3 of the questionnaire).
2. The empirical analysis in this paper was conducted as part of the project: ‘Emigration Study Bosnia and Herzegovina’, supported by the Government of the Federation BiH and implemented by a multidisciplinary team from the Academy of Science and Arts of BiH (ASABiH). An integrated study from this project has been published by ASABiH (see Čičić *et al.* 2019; [https://www.researchgate.net/publication/339487818\\_Studija\\_o\\_emigracijama\\_-\\_Bosna\\_i\\_Hercegovina](https://www.researchgate.net/publication/339487818_Studija_o_emigracijama_-_Bosna_i_Hercegovina)). This article uses extended parts of this online study.
3. Note, this distinction is only for the purpose of easier interpretation as it is not always clear where to place some determinants – e.g. remittances can also be a post-conflict influence.

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## Conflict of interest statement

No conflict of interest was reported by the authors.

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## Appendix 1

**Table 3. Description of interviewees**

I_1 Youth	Female, 18, unmarried and a high-school graduate. She lives in Sarajevo, Novo Sarajevo, with her mother and brother. Unemployed.
I_2 Youth	Male, 23, unmarried, Master's student (II cycle) at Sarajevo's Faculty of Electrical Engineering. Lives in Novo Sarajevo with his parents. Has an older sister who also lives in Sarajevo. Unemployed but working part-time as an associate student.
I_3 Youth	Female, 24, unmarried, recently graduated from the School of Economics and Business at the University of Sarajevo. She lives in Novo Sarajevo with her parents. Her older brother also lives in Sarajevo with his family. Employed.
I_4 IT	Male, 27, single, lives alone in Mostar. Runs his own IT company, 5 years of work experience. Programmer by profession. He has parents and a sister who live in BiH.
I_5 IT	Female, 29, single, lives alone in Banja Luka. Employed as a scrum master and coach in an IT company. Ten years' work experience. She has parents and a younger brother who also live in Banja Luka.
I_6 Medicine	Female, single, employed in a private medical institution. By profession Master of Radiology with 5 years' work experience. Lives with her mother in Sarajevo, Novi Grad. Has an older sister who lives with her family in Herzegovina and two brothers who live outside BiH.
I_7 Returnee	Female, 24, single, lives alone in Sarajevo, Novi Grad. Employed, 5 years of work experience in the hotel industry. Her parents and sister live in the USA.
I_8 Unemployed	Female, 37, married. Unemployed and without work experience, except for internship. She lives with her husband and 2 children in Sarajevo, Novi Grad. She has a mother who also lives in Sarajevo and an older sister with her family.
I_9 State institution	Male, 45, married. Employed at the Faculty of Pharmacy in Sarajevo with 19 years' work experience. Lives with his wife and two children in Sarajevo, Center. His mother and sister also live in BiH.
I_10 Emigrant	Female, 29, unmarried, 5 years' work experience, PhD in management/business. She left BiH 7 years ago and lives and works in the Czech Republic. Her parents and younger brother live in Sarajevo.
I_11 Emigrant	Female, 29, unmarried, Bachelor of Management. She lives and works in the Czech Republic. Her parents and younger brother live in Sarajevo.
I_12 Emigrant	Female, 40, married, 24 years' work experience, graduate economist, certified accountant and broker. She left BiH 3 years ago with her husband and two children. She now lives and works in Germany, where she lived in the early 1990s. Her parents and brother with family live in Sarajevo.
I_13 Emigrant	Female, 39, married, 12 years' work experience. By profession an ophthalmologist. Now lives and works in Germany. Her parents and sister with family live in BiH.

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