National Identity and Religious Diversity

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Abstract

We construct an index for national identity using information from the World Values Survey on peoples' affection towards the nation. We then analyze the relationship between national identity and religious diversity. The results show that religious diversity is significantly and negatively related to national identity. We also find support for the previous finding that ethnic diversity does not seem to be related to national identity. Democratic institutions and mobility throughout the country are positively related to national identity if religious diversity is sufficiently high. Democratic institutions can overcome the negative effect of religious diversity on national identity.

Keywords: National Identity, Minority Groups, Common Values, Democratic Institutions

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I. INTRODUCTION

Large empires have disintegrated into smaller units over the last centuries or, in some cases, only in the last decades. New entities have been formed along specific lines which are today known as nation states. But how did these nations evolve? What do the inhabitants have in common? The analysis of nations is popular in the social and political sciences[1]. But it can also have important implications from an economic point of view. Differences in economic growth and wealth across nations, and their causes, have always been an important field of study for economists.

In the legal studies the definition of a nation is based on three conditions. First, there has to be a group of people which live together in, second, a common territory which has clear borders to the territory of other groups. Third, there has to be a force which governs these people and sets rules to which the inhabitants have to obey. This force, typically called the government, also has to have the ability to put through their rules, for example by handing out punishments to those who do not obey.

Smith (1991) who devotes a whole book to the question of nationality and national identity stresses that there is no generally accepted definition of a nation in the literature. But he lists features which help to define what constitutes a nation. He confirms the legal view arguing that there has to be a human population which lives in a common historical territory. But he adds the factors of a common public culture, common legal rights and duties, and a common economy.

If we assume that these conditions are met and a nation exists, the question arises if and why people feel bonds towards their nationality. We will focus on exactly this question. First of all, we have to clarify what these bonds, which we will call 'national identity' from now on, are made of. Kiely et al. (2001) argue that people claim to identify with their nation by presenting certain identity markers to their fellow countrymen. Bond (2006), following Kiely et al. (2001), stresses the importance of residence, birth, and ancestry as the most important markers of a national identity. Jones (1997) analyzes the determinants of Australian national identity. He splits this concept into two categories. The first group of factors he regards as important for national identity is similar to the idea of identity markers, which he calls nativism. These markers are objectively relatively easy to identify. The second category Jones (1997) proposes, refers to the respect for the country's institutions and a feeling of being Australian. The author calls this the "affective dimension" (p. 290) of national identity.

In the remainder of this paper we will lay the focus on this affective dimension of national identity. We are interested in the degree to which people feel that they belong to the nation. Hereby, we follow Anderson (2006) who describes the nation as an imagined community. In his view people feel attracted to the idea of nationalism although there is no sophisticated philosophical explanation for the

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[1] It is investigated by, e.g. Anderson (2006), Alesina and Spolaore (2003), Bloom (1990), Gillis (1996), Miller (2000), Triandafyllidou (1998), Wodak et al. (1998), or concerning the role for specific nations or Europe by, e.g. Checkel (1999), Maier (1997), Noiriel (1996), or Smith (1992).

existence of nations and national identity. We address this attraction to the concept of nationalism. We are not so much interested in the objective identity markers proposed by Bond (2006), but in the attitudes the people reveal towards their nation and in their feelings of belonging together.

The economic literature stresses the importance a common identity might have. It appears feasible to assume that a common identity increases trust among people which then leads to more favorable economic outcomes[2]. Miguel (2004) shows that nation-building policies in Tanzania created more favorable economic outcomes compared to Kenya, where these policies have not been adopted. Besides the probably positive economic effects of a common identity, Smith (1991) argues that there are also social gains from a national identity, such as social solidarity or popular sovereignty (p. 18). But it also seems obvious that there might be a possible dark side to national identity. This might appear if it is performed overtly strongly. If national identity leads to the discrimination against or even oppression of minorities social instability is likely to arise. Georgiaidis and Manning (2009) show for the United Kingdom that people belonging to minorities are less connected to the nation when they feel they are discriminated against. An extreme outcome of nationalism is described in Calhoun (1993) who refers to ethnic cleansing in the Yugoslav war in the early 1990's. Jones (1997) sees the exclusion of marginalized groups from the labor market as another negative economic consequence of overt nationalism.

Most of the studies cited so far (Bond, 2006; Calhoun, 1993; Jones, 1997; also Miles and Rochefort, 1991) try to explain national identity. They have in common the argument that social heterogeneity prevents the formation of a common national identity[3]. They all refer to the ethnic dimension following the idea of identity markers explained above. The authors argue that in ethnically diverse countries people find it harder to detect the commonness with others and therefore national identity should be lower if the country consists of many different ethnic groups. However, all these studies lack a clear numerical concept of national identity.

In a recent, well executed, study, Masella (2013) examines empirically the relationship between ethnic diversity and national identity. Somewhat surprising, he does not find a statistically significant relationship between the two variables. However, he finds that national identity is lower in minority groups and higher in the majority group when ethnic diversity in a country is high, and vice versa when ethnic diversity is low.

We contribute to this literature by proposing that religious diversity, as another form of social heterogeneity, can better explain the formation of a national identity. Principally, an individual is free to choose his religion whereas ethnicity is predetermined by the genes. The literature on religious

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[2] Compare, for examaple, Tabellini (2010).
[3] Social heterogeneity has been identified as an important variable in other economic studies, e.g. Easterly and Levine (1997) on growth in Africa, La Porta et al. (1999) on government performance, Alesina et al. (1999) on public goods, or Collier and Hoeffler (1998), Montalvo and Reynal-Querol (2005, 2005a), and Vanhanen (1999) on civil conflicts.

switching reveals that religious choice is not necessarily path dependent. Social, educational, occupational, and geographical mobility, as well as marriage are important drivers of religious switching over an individual's life course (see, e.g. Sherkat, 1991; Musick and Wilson, 1995). As Eaton et al. (2011) argue, similar interests, as expressed by performing the same religious rituals, can promote the formation of a common identity even if people come from different backgrounds. Indulging in the same faith and performing the same religious rituals can be a form of signaling conformity with the majority which in turn leads to the formation of a common (national) identity. On the opposite, practicing a different faith creates a cultural difference between people which prevents the formation of a common identity. Consequently, we argue that the choice of a religion, as a signal of conformity with the values exercised in the nation, is more important for the formation of a national identity than coincidental ethnic differences. Rather, these ethnic differences may be overcome by sharing religious beliefs. Following earlier research mentioned above, we expect to find a negative relationship between national identity and social heterogeneity or, to be more explicit, religious diversity.

Our approach differs methodologically from Masella's (2013) study. Masella (2013) measures national identity on the individual level based on a question from the World Values Survey whether a person sees herself belonging to an ethnic group or to the nation. The approach of individual identity is common in the economic literature. Based on the influential article by Akerlof and Kranton (2000) which is the first to incorporate identity in the utility function of individuals, other studies have been conducted to further investigate the formation process[4] of identities and the role of chosen identities[5]. However, we are interested in the societal dimension of national identity. We want to compare countries which differ in religious diversity and see if national identity at the country level is affected by these differences. That is why we quantify national identity at the country level.

Masella (2013) uses one question to measure the national sentiment of each person. One of the main contributions of our study is that we calculate an index of national identity which is based on three indicators. We try to capture one underlying factor to these three indicators to identify the inherent affection towards the nation. The next Section will describe the construction of the index in more detail. Figure 1 shows a scatterplot of our index of national identity and religious diversity at the country level. Furthermore, Masella (2013) admits that his sample consists of only 21 countries which might not be "a good substitute for a world-wide sample". We have data on national identity for 69 countries although some have to be dropped in the empirical analysis due to missing values in other variables. This is obviously still not a perfect substitute for a world sample, but at least we are getting closer.

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[4]Compare Bisin et al. (2010), Clots-Figueras and Masella (2010), Darity et al. (2006), or Manning and Roy (2009).
[5] See e.g. Austin-Smith and Fryer (2005) and Battu et al. (2007) on education decisions, Bodenhorn and Ruebeck (2003) on race identity formation of African Americans, Constant and Zimmerman (2008) and Constant et al. (2009) on the integration of immigrants.

Finally, after establishing that there is no statistically significant relationship between ethnic diversity and national identity, Masella (2013) concentrates on the role of minority and majority groups and presents evidence that the respective behavior changes with ethnic diversity. Our goal is different. We hypothesize a negative relationship between social heterogeneity and national identity and therefore propose that the role of religious diversity should be investigated more closely. In our empirical analysis we show that high levels of religious diversity are indeed correlated with lower levels of national identity. This finding holds when we employ instrumental variable regression in order to account for possible endogeneity. Furthermore, we find that democratic institutions and mobility throughout the country become positively related to national identity when religious diversity increases. Finally, we find a negative relationship between income and national identity.

The paper is organized as follows. Section II describes our index of national identity. Data and methodology are presented in Section III. Section IV shows the empirical results, followed by a discussion in Section V. Section VI briefly concludes.

II.   NATIONAL IDENTITY INDEX

In the Introduction we argue that one of the contributions of this paper is the calculation of an index to measure national identity rather than relying on one single indicator. By calculating an index for national identity, we aim to identify a common underlying factor captured by a set of indicators of national interests and orientations. Furthermore, once one accepts this measure, we are directly able to analyze the determinants of national identity.

Similar to Masella (2013) we use information from the World Values Survey (WVS) to identify indicators which might be used for the calculation of our measure of national identity. However, the selection of the possible indicators should be exercised with caution. Our index is supposed to capture the affective dimension of national identity which is why we are not interested in the objective identity markers described above. Furthermore, we must not include indicators which capture the identity towards another political entity than the nation. In the WVS there is a question that asks whether a person is interested in politics which might, at first glance, be a suitable indicator to predict national identity. But we have to consider that people might be interested in politics but feel far distant from their nation, for example, a lot of people in the Basque country might be interested in politics. But this interest might refer in first place to Basque issues rather than Spanish. In the same line the population in the Northern part of Belgium might be heavily interested in Flemish matters but not too much in Belgian politics. As we are also interested in the relationship between democratic institutions and national identity we also have to exclude those questions to which the answers might depend on the

political system. That is why we do not include indicators such as the confidence in the parliament or the judicial system which would also have been available in the WVS data.

Taking into account these issues we can identify three indicators that are suitable for our purpose. The first indicator is the question on which Masella (2013) bases his analysis. The question asks whether the respondent sees himself belonging to some ethnic group or to the nation. We code this as 1 if the respondent answers he belongs to the nation and 0, otherwise. Anderson (2006) describes that "the nation is always conceived as a deep, horizontal comradeship" (p.7). In the WVS there exists a question if the person is proud of being of the respective nationality. We use this question as a proxy for this conceived comradeship. Anderson (2006) continues: "[I]t is this fraternity that makes it possible, […], not so much to kill, as willingly to die for such limited imaginings." (p.7). We use the question from the WVS if the respondent would be willing to fight for his country to address this issue. We use these three indicators to identify a common factor which we define as national identity.

To derive the national identity index, we apply a principal component analysis. Principal component analysis is an aggregation technique to identify from a set of variables those linear combinations that best capture the common information behind the variables (Filmer and Scott, 2008). The main idea of this approach is to construct an aggregated uni-dimensional index over the range of the three identified indicators. The approach of aggregating different variables to a uni-dimensional index is widely used in the economic and social literature. We closely follow the approach of Filmer and Pritchett (2001) and Sahn and Stifel (2001, 2003) to construct an index of material welfare based on the possession of housing durables. Paldam and Gundlach (2013) use an index approach based on the WVS data to derive an index of religiosity to analyze the religious transition over time[6].

We assume that the three indicators we identified can explain the long-term national identity of a person measured by an aggregated index:

$$NI_j = b_1 a_{j1} + b_2 a_{j2} + b_3 a_{j3}$$

where NI_j is the national identity index, the a_j's refer to the respective variable of the person j recorded as dichotomous variables in the data and the b's are the respective weights for each variable used to aggregate the indicators to a uni-dimensional index and that are to be estimated. In our model this means that the kth identity variable, identified by a_{jk}, with k=1,2,3, is a linear function of a

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[6] A large body of literature also exists using an asset index to explain inequalities in educational outcomes (e.g. Ainsworth and Filmer 2006), health outcomes (e.g. Bollen et al. 2002), child mortality (e.g. Sastry 2004) when data on income or expenditure is missing. In addition, asset indexes are used to analyze changes and determinants of poverty (e.g. Stifel and Christiaensen 2007).

common factor, which is 'national identity' in our case. We rely on the first principal component as our national identity index[7].

One could object that three indicators is a rather small amount to capture the 'true' underlying national identity. However, we explained our criteria for the selection of the indicators and the three questions chosen were the only which fulfilled those criteria. The first component explains around 30% of the covariance indicating that we capture the common factor behind the indicators fairly well. With these indicators we are able to calculate the national identity index for 69 countries. Table A1 in the appendix presents descriptive statistics, while Figure A1 shows the distribution of our index at the micro level. The mean value of the identity index is close to zero with a range of around -2 to +1.5. Table A2 reveals the levels of national identity at the country level.

III. DATA AND METHODOLOGY

1. Data

The index of national identity will be the dependent variable in our empirical estimations. The explanatory variable of main interest is religious diversity, which has also been termed fragmentation or fractionalization. The index of religious diversity measures the probability that two randomly drawn people from a population belong to different religious groups. It takes on the value 0 if everyone belongs to the same group and would equal 1 if everyone in the society was member of a different religious group. It is calculated as 1-H, where H is a Herfindahl-Index which is gained by $\sum_i^N s_i^2$, where s_i is there share of people belonging to each religious group i and N is the number of groups. We use the data on religious fractionalization provided by Alesina et al. (2003). We include ethnic diversity to control if our results are in line with the findings from Masella (2013). Information is taken from the same paper (Alesina et al., 2003).

We include income per capita to control for the possibility that economic development might have an impact on the formation of a national identity. Since income per capita might serve as a control variable for general economic development it can help reduce the negative consequences of possibly omitted variables. Hence income per capita is included in all regressions. In order to reduce the risk of reverse causality we want to use income per capita from a year before 1982 when the observation period on national identity begins. The Maddison (2010) online database offers information on income per capita, also for the single former Soviet nations, for the year 1973.

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[7] An alternative way to estimate the weights to derive the aggregated index is a factor analysis employed, for example, by Sahn and Stifel (2001) and Paldam and Gundlach (2013). However, the two estimation methods show very similar results. For a systematic overview of different aggregation techniques, see Filmer and Scott (2008).

Apparently, the political environment could influence identification with the nation. We control for the level of democracy by including the Polity score from the Polity IV database. It ranges from -10 for autocracies to +10 for full democracies. Smith (1991) proposes that mobility throughout the country might also foster the formation of a national identity. We take this possibility into account by controlling for physical, as well as, non-physical mobility. As a proxy for physical mobility we use the amount of kilometers of paved roads per 1,000 inhabitants. The data come from the CIA World Factbook. We use the number of phone lines per 100 inhabitants to capture the possible effect of non-physical mobility. Information is taken from the World Bank's World Development Indicators. We also control for geographical and geopolitical factors by including controls for country size, population, and latitude and dummy variables for former colonies and EU membership. Information is taken from the CIA World Factbook, the World Bank's World Development Indicators, and Nunn and Puga (2012).

We can calculate the index of national identity for 69 countries. However, for three countries we lack information on the Polity score. These are Iceland, Luxembourg, and Malta, so that these are not included in our regressions. Table 1 gives an overview of the summary statistics for those 66 countries on which we base our empirical results.

Table 1: Country-level Summary Statistics

	Mean	Median	Standard Deviation	Min	Max
National Identity	0.010	0.035	0.375	-0.939	0.886
Religious Diversity	0.461	0.478	0.211	0.004	0.860
Log Income 1973	8.512	8.575	0.862	6.210	9.810
Ethnic Diversity	0.346	0.320	0.226	0.000	0.930
Polity score 1973	-0.894	-7	8.025	-9	10
Area in sqkm	1,304,658	242,324	3,110,025	20,273	17,098,242
Population in mill.	76.835	15.502	221.654	1.340	1337.825
Latitude	31.280	41.890	28.175	-41.806	64.481
Former Colony	0.303	0	0.463	0	1
EU-12 Membership	0.151	0	0.361	0	1
Roads per 1,000	6.658	4.342	6.398	0.147	26.069
Phone Lines per 100	24.162	19.637	18.559	0.216	65.376

National identity ranges from -0.939 to 0.886 index points at the country level. The lowest value is calculated for Japan whereas Morocco displays the highest level of national identity. The median lies between the observations for Argentina and Bulgaria and Ireland comes closest to the mean value. Concerning the explanatory variable of main interest, religious diversity, we find that Morocco is the most homogeneous country. The value implies that the probability that two randomly drawn people

belong to different denominations is only 0.4%. On the other side, this probability amounts to 86% in South Africa, the religiously most diverse country in our sample. Similarly Uganda is the ethnically most heterogeneous country, whereas the probability that two persons belong to different ethnic groups is virtually zero in South Korea.

2. Methodology

We saw in Figure 1 that there appears to be a negative relationship between religious diversity and the level of national identity. We conduct several regressions to verify this suspicion. Unfortunately, Alesina et al. (2003) report data on religious fractionalization for only one point in time. It follows that we cannot run fixed effects panel data methods. Thus, we build the averages of national identity over the five waves of the WVS for each country. We run cross country regressions in which we use income and the polity score from the year 1973 to reduce the risk of reverse causality. The estimated model is of the form:

$$NI_i = \alpha + \beta \times reldiv_i + \gamma \times y_i + \delta \times ethdiv_i + \xi X_i + \varepsilon_i$$

where NI_i is the index of national identity in country i, $reldiv_i$ is religious diversity in country i, y_i is income in country i, $ethdiv_i$ is ethnic diversity in country i, X_i is a vector of the other control variables, and ε_i is the error term.

The coefficient of main interest is β. $\beta > 0$ implies that national identity is higher in countries with a religiously diverse population. $\beta < 0$ would obviously mean that national identity is high at low levels of religious diversity. As we argued in the Introduction, it is feasible to assume a negative relationship, so that we expect the coefficient on religious diversity to be negative.

In our empirical analysis we have to take into account the possible endogeneity of religious diversity, which could arise from reverse causality or omitted variables. Hence, we will have to rely on two stage least squares estimation, for which we need an instrumental variable for religious diversity. Fincher and Thornhill (2008) propose that the disease environment can explain differences in religious diversity across countries. They stress that religious diversity develops from "evolved behavioral strategies for the avoidance and management of infectious disease." (p.1). In their paper, the authors explain the theoretical process which they also evaluate empirically. The essence of their theoretical approach is as follows. Initially a group of individuals is based in a uniform geographical environment. They share a uniform distribution of immunity against specific diseases. As a consequence, there is no need to separate from one another and a common culture, where religion is an integral part of, emerges.

Over time, locally different pathogens, which cause diseases emerge. Parts of the prior uniform group build an immunity pattern against these diseases. However, not the entire population develops the same immunity pattern because the pathogens are, as mentioned above, locally different. It follows

that separate groups evolve out of the former uniform population, which differ with respect to immunity against contagious diseases.

As a consequence of different immunity patterns, the individuals evolutionally developed antipathogen behaviors to prevent the infection with specific diseases. This antipathogen behavior results in two reactions, limited dispersal and assortative sociality. Limited dispersal describes the reaction of individuals from one group with regards to members of other groups. They reduce contact with people who share different immunity patterns in order to reduce the risk of getting infected with a disease against which they are not immune. Likewise, those individuals increase the contact with people from their own group which share the same immunity pattern. As a consequence, assortative sociality then describes the fact that individuals form alliances with people of their group. These alliances include the formation of a common culture in each distinct group.

The probability that individuals reduce intergroup contact increases with the harmfulness of the diseases. This prevents the flow of ideas between groups. Thus, immunologically distinct groups develop different cultures over time, of which religion appears to be an integral part. In their empirical validation, Fincher and Thornhill (2008) verify that there are more religions in countries with higher disease prevalence. They can also explain why religious diversity is especially high in the tropic regions. The authors show that groups disperse over shorter distances in a very stressful disease environment, as in the tropic regions. Small groups separate from each other in small areas, but reduce intergroup contact in order to reduce the risk of getting infected.

For the disease environment to be a suitable instrument, the exclusion restriction requires that the disease environment does not affect the formation of a national identity through another channel than diversity. It is by no means obvious how people should base their attitudes towards their nationality on the probability of being affected by specific diseases. The variables that Fincher and Thornhill (2008) present describe the disease richness and the prevalence of pathogens. People who live in a country will most probably not base their national identity on these variables.

One might argue that the variables proposed by Fincher and Thornhill (2008) might influence national identity through the satisfaction with the country's health system. However, the health system is in most cases used for the treatment of existing diseases instead of fighting disease richness. A possible exception is vaccination against infectious diseases. Even if one accepts that this channel might affect the satisfaction with the health system, this should not affect the national identity index based on our three indicators. We have purposely left out of our calculation those indicators which might be influenced by those feelings. The indicators we chose, the willingness to fight, pride for the nationality, and the preferred geographical group should be independent of the country's disease environment. We cannot think of another way how our index could be affected by the disease

variables, so that we are confident that the exclusion restriction is not violated and that we can use the disease environment as an instrumental variable for religious diversity.

IV.   EMPIRICAL RESULTS

Table 2 presents the results of our empirical estimations. All variables that have been deemed important for the explanation of national identity in the literature are included as control variables. However, the results which are of prior importance are those on religious and ethnic diversity. In column 1 we run cross-country OLS regressions of our index of national identity on religious diversity, the log of income, ethnic diversity, and the set of remaining control variables. The standard errors are shown in parentheses underneath the coefficients. *, **, and *** denote statistical significance at the 10, 5, and 1 percent level, respectively.

As we have noted above we have to consider possible endogeneity issues of our main explanatory variable, religious diversity. Column 2 repeats the regression from column 1, but religious diversity is instrumented by the disease and pathogen variables proposed by Fincher and Thornhill (2008). The two variables enter statistically significantly at the one and two percent level, respectively, in the first stage regressions. However, we have to admit that the first stage F-statistic is only around 4 which is fairly low compared to the F-statistic of 10 which is used as a rule of thumb for the validity of instrumental variables. Statistical tests reveal that our first stage regressions achieve to refuse the hypothesis of underidentification. Nevertheless, the weak identification test of Stock and Yogo (2005) proposes that our instruments are weak. Consequently, we also present standard errors gained with the conditional likelihood ratio approach proposed by Moreira (2003) and implemented for use in Stata by Andrews et al. (2006). These are larger which reduces the level of statistical significance but lets us be optimistic that relationships that appear to be significant are so indeed.

In columns 3 through 6 of Table 2 we add several interaction terms to analyze the institutions that mediate the effect of religious diversity. The results we present are again estimated via two stage least squares. As in column 2 we present the regular standard errors underneath the coefficients and also the standard errors gained by the conditional likelihood ratio approach. In column 3 we add an interaction term between religious diversity and the Polity score. We include an interaction term between religious diversity and the amount of paved roads in column 4. Religious diversity is interacted with phone lines, which we use a s a proxy variable for non-physical mobility, in column 5. Finally, in column 6 we include an interaction term between religious diversity and population size. Table A3 in the appendix presents the results of columns 3 through 6 when using simple OLS regression methodology.

Table 2: Regression results, dependent variable: national identity

	(1)	(2)	(3)	(4)	(5)	(6)
Estimation method	OLS	IV	IV	IV	IV	IV
Religious Diversity	-0.540	-1.329	-1.476	-2.119	-2.120	-1.265
	(0.212)**	(0.586)**	(0.608)**	(1.064)**	(1.069)**	(0.531)**
		(0.648)**	(0.679)**	(1.187)*	(1.193)*	(0.593)**
Log Income 1973	-0.213	-0.288	-0.313	-0.373	-0.327	-0.270
	(0.087)**	(0.102)***	(0.104)***	(0.139)***	(0.116)***	(0.095)***
		(0.113)**	(0.116)***	(0.155)**	(0.129)**	(0.106)**
Ethnic Diversity	0.042	0.322	0.370	0.310	0.254	0.290
	(0.192)	(0.275)	(0.280)	(0.292)	(0.265)	(0.254)
		(0.304)	(0.313)	(0.326)	(0.295)	(0.284)
Polity Score 1973	0.008	0.004	-0.017	0.002	0.003	0.006
	(0.006)	(0.007)	(0.013)	(0.008)	(0.007)	(0.007)
		(0.008)	(0.014)	(0.009)	(0.008)	(0.008)
Area	0.000	0.000	0.000	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Population in mill.	0.000	0.000	0.000	0.000	0.000	-0.001
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)
		(0.000)	(0.000)	(0.000)	(0.000)	(0.001)
Latitude	-0.003	-0.006	-0.006	-0.005	-0.005	-0.006
	(0.002)	(0.003)**	(0.003)*	(0.003)*	(0.003)*	(0.003)**
		(0.003)*	(0.003)*	(0.003)	(0.003)*	(0.003)*
Former Colony	-0.084	-0.293	-0.323	-0.246	-0.269	-0.242
	(0.144)	(0.205)	(0.209)	(0.205)	(0.208)	(0.183)
		(0.227)	(0.233)	(0.229)	(0.232)	(0.204)
EU-12 Member	-0.376	-0.414	-0.438	-0.311	-0.333	-0.416
	(0.116)***	(0.120)***	(0.122)***	(0.127)**	(0.112)***	(0.118)***
		(0.133)***	(0.136)***	(0.142)**	(0.125)**	(0.131)***
Roads per 1,000	0.002	-0.005	-0.005	-0.059	0.005	-0.003
	(0.008)	(0.010)	(0.010)	(0.037)*	(0.008)	(0.009)
		(0.011)	(0.011)	(0.041)	(0.009)	(0.010)
Phone Lines per 100	-0.001	0.006	0.006	0.007	-0.017	0.005
	(0.005)	(0.007)	(0.007)	(0.008)	(0.009)**	(0.006)
		(0.008)	(0.008)	(0.009)	(0.010)*	(0.007)
Religious Diversity x Polity Score 1973			0.051			
			(0.024)**			
			(0.027)*			
Religious Diversity x Roads per 1,000				0.137		
				(0.079)*		
				(0.088)		
Religious Diversity x Phone Lines per 100					0.044	
					(0.024)*	
					(0.027)*	
Religious Diversity x Population in mill.						0.001
						(0.001)
						(0.001)
Constant	2.255	3.183	3.461	4.128	3.861	3.016
	(0.746)***	(0.992)***	(1.024)***	(1.464)***	(1.313)***	(0.908)***
		(1.096)***	(1.143)***	(1.634)**	(1.465)**	(1.014)***
Observations	66	66	66	66	66	66
R²	0.425	0.400	0.398	0.344	0.461	0.429

The most important results are gained from the upper panel of Table 2. Religious diversity always enters negatively as proposed in the Introduction. It appears that higher levels of religious diversity are correlated with lower levels of national identity. This finding is statistically significant at the five percent level in almost all specifications. In columns 4 and 5 the coefficient fails to reach significance at the five percent level only slightly if the conditional likelihood ratio approach is used. However, the coefficient remains significant at the ten percent level. The size of the coefficient is remarkably larger in the instrumental variable regressions compared to the OLS regressions in column 1 and also in Table A3. It appears that the OLS estimation does indeed suffer from bias.

In column 1, a difference in the index of religious diversity of 0.1 points correlates with a difference in our measure of national identity by 0.054 index points. Considering that national identity is distributed between -1 and +1, this effect is rather small. The index of religious diversity is by 0.856 index points higher in the most diverse country compared to the most homogeneous country. This implies a difference in national identity by 0.46 index points. Increasing religious diversity by one standard deviation goes along with national identity, which is lower by 0.11 index points, or 30% of a standard deviation.

In the instrumental variable regression of column 2 the coefficient on religious diversity increases in absolute terms to 1.329, which implies that countries in which religious diversity is higher by 0.1 index points display national identity which is lower by 0.133 index points. Compared to the interpretation above, the difference in religious diversity between the most and least homogeneous countries amounts to a difference in national identity of 1.14 index points. An increase of religious diversity by one standard deviation correlates with a reduction of national identity by 0.28 index points, or approximately three quarter of a standard deviation.

Our results are in line with Masella (2013) who does not find a significant relationship between ethnic diversity and national identity. Somehow counter-intuitively he finds that the relationship is even slightly positive. Our results support this finding. In all specifications the coefficient on ethnic diversity is positive, however far from statistical significance. It appears that ethnic diversity is not an important driver for the formation of a national identity. The sociological and political literature feasibly assumes that social heterogeneity should have detrimental effects on the formation of a common identity. Our results indicate that religious diversity seems to be the driving force behind this argument.

Our results establish a negative relationship between the level of income and national identity. The size of the coefficient is stable throughout all specifications, including the OLS regressions from Table A3. It takes on values between -0.21 and -0.24 in the OLS regressions and is slightly larger (-0.28 to -0.37) in the instrumental variable regressions. It always enters significantly at the one or, at least, five percent significance level. Taking the coefficient from column 2 implies that income, which is higher

by one standard deviation is related to national identity levels which are lower by 0.25 index points, or two thirds of a standard deviation.

From all the other covariates which we include in column 2, only latitude and the EU dummy variable enter statistically significantly. Latitude appears to be negatively related to national identity. The dummy variable for membership in the EU-12 enters negatively and highly significantly. Except from column 4 it is always significant at the one percent level. Being a member of the EU-12 reduces national identity by approximately 0.4 index points. Neither the Polity score, nor area and population, nor the mobility variables come close to statistical significance at conventional levels in column 2.

In column 3 we include an interaction term between religious diversity and the Polity score. We find that this interaction term is positive and significant at the five percent level (at the ten percent level relying on the conditional likelihood ratio approach). The coefficient on the Polity score, which is slightly positive in all other regressions turns to negative when the interaction term is included. It is also larger in absolute terms. The interpretation behind this finding is as follows. Democratic institutions are negatively related to national identity at low levels of religious diversity. At higher levels of religious diversity, the relationship between the level of democracy and national identity becomes positive. The relationship between democracy and national identity is just zero if the index of religious diversity takes on the value 0.333. At lower levels of religious diversity, democracy and national identity are negatively related; at higher levels of religious diversity they are obviously positively related. It follows that the relationship between democratic institutions and national identity is positive at the mean and median values of religious diversity.

The interpretation is similar for the results in columns 4 and 5 in which we include interaction terms between religious diversity and the two mobility variables. Both interaction terms are positive, whereas the coefficients on roads and phone lines become negative and significant in columns 4 and 5, respectively. It also has to be noted that the coefficient on religious diversity is absolutely larger in these two regressions. Similar to the interpretation of column 3, it appears that mobility and national identity are negatively related in religiously homogeneous countries. At higher levels of religious diversity the relationship becomes positive. The values of religious diversity at which the effect of mobility on national identity is zero equals 0.431 in the case of paved roads and 0.389 for phone lines. Rephrasing it from another perspective, the findings from columns 3 through 5 indicate that the negative relationship between religious diversity and the level of national identity can be attenuated by higher levels of democracy and mobility, respectively.

Finally, interacting religious diversity and population size in column 6 does merely not change the results from column 2. It appears that population size does not influence the formation of a common national identity. Comparing these results to those from Table A3 does not reveal major differences, apart from differences in the size of the coefficients.

V. DISCUSSION

Our empirical estimations develop important results concerning the relationship between social heterogeneity and the formation of a national identity. Confirming the finding from Masella (2013), we find that ethnic diversity does not seem to be an important predictor of national identity. Instead, we show that religious diversity, as another dimension of social heterogeneity, is negatively correlated with the level of national identity. Interestingly, Georgiadis and Manning (2009) do not find an important influence of religion on national identity in Britain. However, they investigate the role of each specific denomination on national identity. Our approach reveals that religious diversity within a society affects the level to which people identify with their nationality.

We propose the following interpretation of our main result. People search for networks with which they can identify. They generate utility from being part of a group that shares the same values and norms. These values and norms are to a large extent determined by cultural beliefs and religion is an integral part of a culture. In countries that are religiously very homogeneous people find it easy to share a set of common values with their neighbors. They engage in the same rituals and follow the same norms which serve as a signal that they agree on existing values in the society. When they realize that the entire population follows these same rules, people feel that they belong together, which results in the formation of a common national identity.

Societies that are constituted of many different religious groups find it harder to share a set of common values. It may be that the rituals of one religious group are regarded as strange or maybe even wrong by another religious group. This can lead to conflicts between religious groups within one society. Consequently, the adherents to different denominations separate themselves from each other and they do not form a common identity on the national level. This interpretation is in line with the findings of Bisin et al. (2010) who point out that cultural distinctiveness describes peoples' behavior. Apparently, people who cannot identify with others on a broader base prefer to form distinct and different identities.

The role of religious diversity appears to be of major importance for the formation of a common identity compared to ethnic diversity. No one can be made responsible for his ethnic heritage. However, as shown by the literature on religious switching, religious networks may be chosen independent of race. If people of different ethnicities engage in the same religious rituals and beliefs they share a common culture. Practicing the same religious faith can even overcome possible prejudices which might be based on ethnic differences. On the contrary, different religious groups may find it hard to find compromises on which rituals and norms are right and which should be abandoned. Choosing a religious group is more important for the formation of a common identity than the given ethnic background. This can explain why ethnic diversity does not reveal a significant relationship with national identity while religious diversity does.

In columns 3 through 6 of Table 2 we investigated the role of institutions, which might mediate the effect of religious diversity on national identity. We have shown that the Polity score, as a proxy variable for democratic institutions, has a negative impact on the level of national identity when religious diversity is low. However, this effect turns out to be positive if religious diversity is sufficiently high. Since the relationship between religious diversity itself and national identity is negative, it appears that democratic institutions can alleviate this negative effect. Georgiadis and Manning (2009) also show that people from minority groups feel less well of if they feel that they are discriminated against. In autocratic regimes there is a higher probability that minority groups are discriminated against by the ruling elite. If the country has more democratic institutions, minority groups can participate in elections and the political decision process. It follows that countries in which religious diversity is very high, democratic institutions can help to form a common identity because different religious practices are not banned as being wrong. One could argue that democratic institutions create a higher level of tolerance so that people can form a common national identity based on other factors than their religious beliefs. It should not remain unmentioned that democratic institutions appear to have a detrimental effect on national identity in very homogeneous countries.

Smith (1991) argues that mobility throughout the country is another important factor for national identification. Our baseline regressions did not reveal a significant relationship. However, the interaction terms in columns 4 and 5 of Table 2 imply that mobility is positively related to national identity when religious diversity is high. Mobility throughout the country, either physical or non-physical, can overcome the negative effect of religious diversity because it helps to get into contact with other people. As long as individuals interact only with people from their own religious group they might generate prejudices against those from other religious groups. These can be mitigated if travelling throughout the country is possible. If people see that their fellow countrymen are not that different from themselves although they adhere to a different faith, they will still be able to form a common identity.

Finally, we find that income and national identity are negatively related. Although we cannot definitely determine the way of causation, it appears feasible to assume that higher income leads to lower levels of national identity. Paldam and Gundlach (2013) show that rising levels of income lead to a reduction in religiosity. Gundlach and Opfinger (2013) and Hirschle (2011) argue that it becomes more costly to engage in time-consuming religious behavior as the income level rises. People face higher opportunity costs when spending several hours in a temple or church if they can generate a high income in the same time compared to a situation where wages are very low. This leads to a decrease in religiosity when income levels rise.

A similar way of argumentation may hold for national identity. If people face the opportunity to gain high income they might spend less time figuring out if their neighbors share the same values and engage in the same rituals. It might be more important to them with whom they can cooperate to

generate income, independent of religious or ethnic background. Furthermore, the social sciences and psychological literature proposes that there is a trend of isolation in the richest societies. This trend might be termed 'rising individualism' (compare Kahneman, 2011). As the world becomes ever more globalized and networked via internet and other modern media the need for social interaction on a personal basis might decline. This induces people to reduce their interest in their neighbors and the rest of their fellow countrymen. In a highly individualistic society people do not feel the need to search for networks with which they can identify. This reduces the ties to one's society and therefore leads to a lower level of national identity.

Psychological studies, which are based on influential work by Tajfel (1970) stress the importance of common values, or a common identity, for the smooth functioning of a society. The probability of social tensions can be reduced if a common national identity is formed. Consequently, one can ask which policy advice can be drawn from our findings if nation-building policies should be adopted. Apparently, lower levels of religious diversity are related to higher national identity. However, the solution must not be to force the whole population to adopt the same religion. Rather, governments should pursue policies which make differences in religious belief less important in everyday life. The main policy goal should be to prevent people from being discriminated against because of their religion. This might help the formation of a common national identity, as Georgiadis and Manning (2009) show.

Furthermore, our results imply that democratic institutions and mobility throughout the country can alleviate the negative effect of religious diversity on national identity. Democracy, as well as mobility, are positively related to national identity if religious diversity is sufficiently high. It appears appropriate to conclude that democratic institutions should be adopted in diverse countries and investments in the infrastructure which foster mobility can help to refute prejudices against different groups.

VI.   CONCLUSION

We calculate a measure for national identity to make it comparable across countries. Our index is based on answers to questions from the World Values Survey and consists of three indicators: the preferred geographical group, willingness to fight for the country, and pride for the nationality.

In the empirical part we investigate the relationship between this measure of national identity and social heterogeneity. Although earlier research suggests that diversity should have a negative influence on national identity, Masella (2013) cannot find a statistically significant relationship between national identity and ethnic diversity. We can confirm this finding. But our results indicate that there is a

statistically significant negative relationship between our measure of national identity and religious diversity.

Furthermore, we find that there appears to be a negative relationship between the level of income and national identity. Democratic institutions and mobility throughout the country, which have been proposed as important determinants for the formation of a national identity, seem to have a positive effect on national identity only if the level of religious diversity is sufficiently high.

We argue that people search for networks with which they can identify. These networks are based on common values and norms which can be found in executing the same religious rituals. If the entire population belongs to the same religion a common culture emerges with which people identify. However, if people belong to different religions they cannot find a set of common values. High religious diversity may lead to conflict between the different groups, which prevents the population from forming a common national identity.

We propose that governments should pursue policies, which secure the rights of minorities. People must not feel discriminated against because this feeling might weaken their ties to the nation. Furthermore, building up democratic institutions should be supported as these might help overcome the negative effect of high religious diversity. Investments in infrastructure can have possible positive effects on national identity if these help to reduce prejudices within the population.

APPENDIX

Figure A1: Distribution of national identity at the microlevel

-FIGURE A1 HERE-

Table A1: Descriptive Statistics of the national identity index at the micro level

Indicators	Mean	SD	Obs
Very proud of nationality (=1)	0.562	0.496	332,747
Willing to fight for country (=1)	0.732	0.443	256,999
Geographical group belonging to: country (=1)	0.337	0.472	254,120
National identity index (mean)	-0.009		172,753
National identity index (sd)	1.009		
National identity index (min)	-1.921		
National identity index (max)	1.443		
% of covariance explained by first principal component	0.291		
Eigenvalue of first principal component	1.681		

Table A2: National Identity at the country level (means)

Country	Index Value	Willing to fight	Belonging to country	Proud of nationality	Country	Index Value	Willing to fight	Belonging to country	Proud of nationality
Albania	0.173	0.763	0.290	0.648	Lithuania	-0.349	0.750	0.279	0.272
Argentina	0.033	0.626	0.467	0.587	Luxembourg	-0.393	0.544	0.246	0.476
Armenia	0.063	0.804	0.455	0.435	Macedonia	0.309	0.815	0.369	0.643
Australia	0.320	0.710	0.438	0.706	Malta	0.235	0.721	0.306	0.759
Austria	-0.255	0.604	0.267	0.537	Mexico	0.129	0.771	0.264	0.706
Azerbaijan	0.508	0.971	0.451	0.637	Moldova	-0.212	0.774	0.332	0.257
Bangladesh	0.580	0.922	0.463	0.754	Morocco	0.886	0.883	0.617	0.776
Belarus	-0.157	0.880	0.270	0.312	Netherlands	-0.555	0.586	0.354	0.216
Belgium	-0.859	0.379	0.226	0.281	New Zealand	0.234	0.640	0.556	0.678
Bosnia/Herc.	-0.017	0.783	0.322	0.472	Nigeria	0.045	0.714	0.306	0.674
Brazil	-0.248	0.535	0.298	0.556	Norway	-0.056	0.893	0.176	0.479
Bulgaria	0.037	0.767	0.376	0.424	Peru	0.407	0.822	0.341	0.782
Canada	-0.029	0.640	0.303	0.656	Philippines	0.283	0.874	0.156	0.797
Chile	0.114	0.700	0.415	0.597	Poland	0.489	0.846	0.398	0.677
China	0.145	0.925	0.433	0.312	Portugal	-0.319	0.680	0.318	0.582
Croatia	-0.149	0.818	0.196	0.421	Romania	0.057	0.810	0.298	0.440
Czech Rep.	-0.278	0.740	0.358	0.287	Russia	-0.317	0.807	0.230	0.333
Denmark	-0.152	0.809	0.265	0.395	Serbia	-0.151	0.756	0.233	0.396
Dominican R.	0.100	0.788	0.088	0.762	Slovak Rep.	-0.388	0.706	0.210	0.320
Estonia	-0.364	0.832	0.171	0.251	Slovenia	0.292	0.863	0.375	0.580
Finland	0.080	0.852	0.372	0.481	South Africa	0.198	0.677	0.430	0.698
France	-0.470	0.577	0.286	0.344	Spain	-0.234	0.569	0.299	0.519
Georgia	0.241	0.714	0.493	0.696	Sweden	-0.059	0.884	0.245	0.403
Germany	-0.932	0.433	0.186	0.211	Switzerland	-0.360	0.712	0.212	0.345
Guatemala	0.377	0.696	0.405	0.878	Tanzania	0.467	0.931	0.249	0.817
Hungary	-0.052	0.799	0.304	0.553	Turkey	0.629	0.956	0.452	0.697
Iceland	0.159	0.755	0.493	0.601	Uganda	0.108	0.651	0.429	0.659
India	0.434	0.877	0.337	0.729	Ukraine	-0.316	0.778	0.263	0.257
Iraq	0.022	0.372	0.597	0.805	United Kingdom	-0.069	0.694	0.294	0.522
Ireland	0.021	0.611	0.282	0.725	Uruguay	0.158	0.548	0.520	0.747
Italy	-0.644	0.435	0.248	0.400	USA	0.236	0.737	0.291	0.745
Japan	-0.939	0.257	0.331	0.259	Venezuela	0.629	0.840	0.408	0.930
Korea (Rep.)	-0.033	0.809	0.403	0.314	Vietnam	0.757	0.964	0.542	0.798
Kyrgyzstan	0.122	0.870	0.467	0.429	Zimbabwe	0.098	0.553	0.431	0.775
Latvia	-0.166	0.804	0.324	0.364					

Table A3: Regression results with interaction terms and OLS estimation

	(1)	(2)	(3)	(4)
Estimation method	OLS	OLS	OLS	OLS
Religious Diversity	-0.587	-0.803	-1.048	-0.555
	(0.210)***	(0.275)***	(0.295)***	(0.219)**
Log Income 1973	-0.226	-0.241	-0.244	-0.211
	(0.085)**	(0.088)***	(0.084)***	(0.088)**
Ethnic Diversity	0.055	0.041	0.057	0.045
	(0.189)	(0.190)	(0.185)	(0.194)
Polity Score 1973	-0.008	0.007	0.007	0.009
	(0.010)	(0.006)	(0.006)	(0.007)
Area	0.000	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)
Population in mill.	0.000	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.001)
Latitude	-0.002	-0.003	-0.003	-0.003
	(0.002)	(0.002)	(0.002)	(0.002)
Former Colony	-0.090	-0.071	-0.108	-0.077
	(0.141)	(0.143)	(0.139)	(0.147)
EU-12 Member	-0.391	-0.342	-0.343	-0.378
	(0.114)***	(0.117)***	(0.112)***	(0.117)***
Roads per 1,000	0.002	-0.016	0.005	0.002
	(0.008)	(0.015)	(0.008)	(0.008)
Phone Lines per 100	-0.002	0.000	-0.011	-0.001
	(0.005)	(0.005)	(0.006)*	(0.005)
Religious Diversity x Polity Score 1973	0.040			
	(0.022)*			
Religious Diversity x Roads per 1,000		0.044		
		(0.030)		
Religious Diversity x Phone Lines per 100			0.021	
			(0.009)**	
Religious Diversity x Population in mill.				0.000
				(0.001)
Constant	2.390	2.569	2.732	2.243
	(0.735)***	(0.768)***	(0.743)***	(0.753)***
Observations	66	66	66	66
adj. R²	0.448	0.438	0.471	0.416

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