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How Ethnic Diversity Affects Economic Growth

ERKAN GÖREN *

Carl von Ossietzky University Oldenburg, Campus Haarentor, Building A5, 26111 Oldenburg, Germany

Summary. — This paper investigates the empirical relationship between ethnic diversity, polarization, and economic growth. Ethnicity is assumed to affect economic growth through a number of possible transmission channels that are generally included in cross-country growth regressions. This paper provides an extensive empirical analysis shedding light on the various sources through which ethnic diversity and polarization affects economic growth indirectly. It advances and empirically establishes the hypothesis that ethnic diversity has a strong direct negative impact on economic growth, whereas ethnic polarization has non-negligible indirect economic effects through the specified channel variables.

Key words — ethnic diversity, ethnic polarization, transmission channels, economic growth

1. INTRODUCTION

In recent years, there has been growing research interest in the relationship between ethnic diversity and economic growth. In a seminal paper, Easterly and Levine (1997) showed that the growth rate of GDP per capita is inversely related to the degree of ethnic diversity within a country. They argued that the poor economic performance of most of the African countries is due partly to the large number of different ethnic groups living in the same country and partly to the absurd borders drawn by former colonial powers. However, when controlling for other factors—namely, human capital, and political instability—the effect of the ethnic diversity measure was weaker. This may have been due to the variables included in a standard growth regression acting as transmission channels for the indirect impact of ethnic diversity on economic growth. [1] This point raises the question of whether highly diverse societies suffer indirectly from poor government performance. Although Easterly and Levine (1997) addressed this important issue by means of ethnic diversity and government performance indicators, they also provided a regression of government performance indicators on the only explanatory variable, ethnic diversity. They concluded that ethnic diversity is indeed accompanied by low school attainment, financial depth, and infrastructure quality. Furthermore, they showed that ethnic diversity also leads to higher market distortions.

A more comprehensive analysis of ethnic diversity and the quality of government was carried out by La Porta, Lopez-de-Silanes, Shleifer, and Vishny (1999). In their article, they investigated the influence of a broader set of possible determinants of the quality of good government performance. They argued that good economic institutions, especially those in the public sector, promote per capita GDP growth—for example, by limiting the private influence of the government and establishing an uncorrupt bureaucracy and legal system that protects property rights and enforces contracts. One of their main conclusions is that ethnic diverse societies exhibit inferior government performance. The findings in Collier (2001) also suggest that ethnic diverse societies suffer from bad public sector performance, which in turn reduces economic performance.

An updated analysis of the findings in Easterly and Levine (1997) was performed by Alesina, Devleeschauwer, Easterly, Kurlat, and Wacziarg (2003), providing new, on a highly disaggregated level, measures of ethnic, linguistic, and religious diversity for about 190 countries. They criticized the widely used ethnic measure from *Atlas Narodov Mira* for its inability to distinguish between ethnic and linguistic differences. Such a distinction may well be unproblematic in African and European countries, where people identify themselves by both ethnic group and language: in these contexts, the two criteria coincide. This is not the case in Latin American countries, where people are more or less homogeneous in terms of language (e.g., Spanish or Portuguese) but distinct in terms of ethnic membership. Alesina *et al.* (2003) reran the regressions of Easterly and Levine (1997), but on their ethnic diversity measure, which relies on ethnic distinctions rather than linguistic distinctions. As they controlled for variables that can be interpreted as channels through which ethnic diversity affects growth (for example schooling, government consumption, infrastructure quality, etc.), the magnitude of the ethnic effect vanished and became statistically insignificant, suggesting once again that ethnic diversity may affect economic performance indirectly through these channels. Besides the variable for market distortions, the authors found a statistically significant relationship of ethnic diversity with schooling, political instability, financial depth, the fiscal surplus to GDP ratio, and infrastructure quality using the same econometric specification as Easterly and Levine (1997). However, the lack of specified transmission channels leads to the conjecture that the estimated effect of ethnic diversity in each of the loosely specified transmission channels suffers from omitted variables bias. It is not clear precisely what the diversity measure captures when the transmission channels are not well specified. Furthermore, the authors failed to explain the importance of each of the transmission channels for real per capita income growth.

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Another strand of literature investigates ethnic violence, especially civil wars, and its detrimental effects on economic performance. Garcia-Montalvo and Reynal-Querol (2005b) stressed the importance of political instability on economic development when countries exhibit a high degree of potential ethnic conflict. The authors found that in ethnic diverse societies, the diffusion of ideas is impeded, especially when the different ethnic groups are in conflict. In such environments of latent ethnic violence, business as usual is impossible because all levels of economic activity are affected. Empirical studies of this problem by Collier (2001) and Garcia-Montalvo and Reynal-Querol (2005b) reported no positive relationship between ethnic diversity and the incidence of civil wars. Instead, they found that high ethnic diversity makes societies safer because the coordination costs are higher and because no one ethnic group is large enough to dominate the others. Garcia-Montalvo and Reynal-Querol (2005b) found that not ethnic diversity but rather polarization is one of the main factors affecting the incidence of civil wars. Unfortunately, a measure of ethnic diversity is unable to capture ethnic polarization across countries. As the authors stressed, there is less violence in highly homogeneous and highly diverse societies, and the incidence of civil wars is the highest in societies where the ruling ethnic group dominates a non-negligible minority. Such cases require a measure of polarization, rather than diversity, that captures the latent danger of ethnic conflicts.[2]

Despite the fact that the ethnic composition of countries may have strong indirect effects on economic growth, the above articles deal primarily with its direct empirical quantification. Campos and Kuzeyev (2007) confirmed that more research is needed in order to identify the main transmission channels through which ethnic diversity and polarization affects economic performance.[3] A first attempt to assess the quantitative importance of possible transmission channels by which ethnic diversity and polarization indirectly affects growth was made by Garcia-Montalvo and Reynal-Querol (2005a). They specified and estimated a comprehensive system of equations determining growth and possible transmission channels through which ethnic diversity and polarization may affect growth. They argued that ethnic polarization negatively affects growth because it reduces the rate of investment and increases public consumption and the incidence of civil wars. By contrast, their results suggest that ethnic diversity does not affect real per capita income growth indirectly through these channels but rather directly, for example, by reducing the diffusion of ideas across the economy. These results are in contrast to the estimates of Easterly and Levine (1997) and Alesina *et al.* (2003), who find a negative association between ethnic *diversity* on the one hand and fiscal stance and political stability on the other.

The starting point of this paper are the empirical findings of indirect effects of ethnic diversity and polarization on economic growth reported in Garcia-Montalvo and Reynal-Querol (2005a). Studies on the relationship between ethnicity and economic growth have shown the importance of focusing on the effects of channel variables that are also important explanatory variables in reduced-form growth regressions. This issue deserves closer examination, both with regard to the ethnic measures used and the specification of the relevant channels. Opening the black box on how both ethnic measures affects economic growth can contribute a more thorough understanding of its costs and allow its direct and indirect effects to be distinguished from its economic and political outcomes. The narrow focus on direct effects of ethnicity on social or political outcomes neglects important indirect effects, as discussed above. As will be shown, ethnicity directly plays an important role in the social and political institutions that influence economic development. An analysis of the indirect economic effects must, in a first step, formulate sound hypotheses explaining why ethnicity should affect economic growth through an explicit channel. For instance, it has been argued that ethnic polarized societies may breed ethnic hatred, and in the worst case, may end up in civil war. But civil wars hinder the economic development of countries. So far, the economics literature on the indirect effects of ethnicity has focused primarily on the channels of investment, government consumption, and civil war. Further research is needed on the remaining channel variables in cross-country growth regressions. For example, how do both ethnic measures affect economic growth through schooling, political instability, market distortions, foreign trade, and the fertility rate? All these variables are generally known to affect long-run economic growth and hence economic development of countries. This research undertakes an elaborative attempt in trying to integrate the two so far separate literatures on ethnic polarization as a source of ethnic conflict and ethnic diversity as a factor for the macroeconomic performance of countries. Therefore, a closer examination of the involved transmission channels seems necessary. The methodology chosen here is to specify all relevant channel variables that appear on the right-hand side of the growth equation. In this paper, each channel variable affecting economic growth is specified on previous findings in the political and economics science literature. This will serve to assess the direct and indirect effects of both ethnic measures on economic growth for each of the channel variables. The empirical analysis suggests that ethnic diversity is a strong predictive measure for the direct effect of ethnicity on economic growth, whereas ethnic polarization has strong predictive power for the indirect effects. Furthermore, test statistics for the nonlinear combinations of estimators using the delta method are provided.[4] Contrary to most economic growth studies regarding ethnic diversity and polarization, an updated data set for the period 1960–99 is used. One possible advantage of using an updated data set is that it allows to test whether the relationship between ethnicity and growth can be confirmed. Furthermore, the updated data set delivers more observations for the extended econometric system and hence will improve the efficiency of the parameter estimates.

The remaining part of the paper is organized as follows. Section 2 deals with the measurement of ethnic diversity and polarization and highlights some important conceptual differences. Section 3 describes possible transmission channels through which both ethnic measures may indirectly influence economic growth, and more importantly, discusses potential reasons why these measures may be related to each of the channel variables. Section 4 deals with the specification of the relevant transmission channels from existing political and economics science studies. Furthermore, Section 4 also provides a brief discussion of the underlying data sources and highlights the econometric methodology in quantifying the economic effects of ethnicity on growth. The empirical results are given in Section 5. Section 6 checks the robustness of the results and presents further insights into how ethnic diversity and polarization are assumed to affect economic growth. Finally, Section 7 concludes.

2. ON THE MEASUREMENT OF ETHNIC DIVERSITY AND POLARIZATION

The empirical literature pertaining to the determinants of socioeconomic outcomes generally relied on two different