Sociocultural Diversity, Competitiveness, Development

Zsuzsanna Bacsi*

Abstract

There is a belief that ethnic or cultural diversity would necessarily bring about difficulties of understanding and cooperation, lower economic performance, less stable economic and social processes and, ultimately a slowdown of economic output. On the other hand, ethnic fractionalisation and the resulting cultural diversity can create a pool of valuable resources comprising knowledge, traditions, skills, customs, that can initiate innovative ideas and creativity. The paper analyses the impacts of ethnic, linguistic and religious diversity on the competitiveness of countries, their income levels, and quality of life, measured by the Global Competitiveness Index. A cross-country multiple regression analysis of 155 countries was done, comparing different diversity indicators and assessing their impacts on GCI, GNI per capita and HDI. Linguistic diversity was found to positively influence economic performance, while ethnic fractionalisation had negative impacts only in high-income countries. Religious diversity did not show any significant impacts on any of the three assessed development indicators.

Keywords

Diversity; Ethnic fractionalisation; Linguistic fractionalisation; Religious fractionalisation; GCI; GNI; HDI

Introduction

Increasing concern is experienced about the fact, that global migration may cause serious problems in the societies of affluent countries. Immigrants having cultural backgrounds very different from the host country might generate ethnic conflicts, and their integration might become difficult or impossible, creating intolerable cultural fractionalisation in the host countries. There is a belief that ethnic or cultural fractionalisation would necessarily bring about difficulties of understanding and cooperation, lower economic performance, less stable economic and social processes and, ultimately a slowdown of economic output. On the other hand, ethnic fractionalisation and the resulting cultural diversity can be welcome as a pool of valuable resources comprising knowledge, traditions, skills, customs, that can initiate innovative ideas and creativity. History can provide examples for both. Countries with ethnically and culturally mixed populations are among the most developed countries of the world, that provide high living standards for their population, while others suffer from low living standards often aggravated by wild and violent ethnic conflicts. The question arises, whether differences leading to tensions and conflicts, or variety leading to the enrichment of resources play a stronger role. What are the mechanisms through which the effects of diversity operate on various socioeconomic processes? Many papers have analysed the impacts of cultural diversity on various measures of economic performance, but relatively little is known about the possible impacts on competitiveness, and on the quality of life. Therefore, in the present paper evidence is looked for the relationship between ethnic, linguistic and religious diversity and the performance of countries measured by GNI per capita, Human Development Index and Global Competitiveness Index, in a cross-country statistical analysis of 155 countries of the world. The main objective is to find patterns of diversity that distinguish countries that are successful actors in the global economy.

Literature Review

The relationship between diversity - including ethnic, religious, or linguistic diversity - and development has been intensively researched in the past decades. Theoretical considerations suggest, that the varied ethnic or cultural composition of the population can be a valuable human resource, and generate increasing innovative capacity and creativity, which in turn, can improve the economic performance of firms, businesses, regions and countries [1-4]. On the other hand, social heterogeneity can hinder economic performance, by influencing individual preferences, strategies and the production function itself. Individuals tend to attribute higher utilities to events that increase the well-being of their own social groups. People prefer to have homogeneous work environments to decrease transaction costs, which has an impact on their individual strategies. Variability and diverse pools of skills and abilities may increase productivity, but lack of understanding and disinclination to cooperate may decrease it, thus variety can change the production function, too [5]. The positive or negative economic impacts of diversity may be enhanced or dampened by education, that raise or diminish prejudices and discrimination. Better education can lead to more tolerance and capability to cope with diversity, and tolerance is an important social value, related to the preservation of cultural heritage [6].

The relationship of economic development to diversity has been tested by many researchers, most of whom based their assessment on regressions of the growth rate of GDP per capita to the level of diversity described by an index of fractionalisation, discussed later. Most of the results showed that increasing diversity - especially ethnic diversity - leads to lower growth of GDP per capita [7-11], although ethnic fractionalisation may have less harmful effects in more developed countries [5,12], where the level of democracy, or initial income per capita is higher. The impact of fractionalisation is also influenced by several conditions, handled in models as control variables. These include geographic location, schooling, infrastructural level, political and societal instability, level of education [5,9,12], or country size, measured by area or population [10,11,13,14].

Another aspect of the impact of sociocultural fractionalisation is its relationship to the actual level of GDP per capita, as is analysed by Alesina et al. [15] and Bacsi et al. [16,17]. These studies used control variables of regional location and the historical past of the country (type of colonisation, state foundation, etc.), and found a negative effect of ethnic fractionalisation on GDP per capita, while the effects of control variables were not significant. Ethnic fractionalisation was
also found to have a negative impact on public policy spending and on government transfers [5,18,19].

The impact of diversity on the quality of life was assessed by measuring its impact on the Human Development Index (HDI). The impacts on HDI are more controversial: ethnic or linguistic fractionalisation did not show any significant impact, while religious fractionalisation showed a negative effect on HDI of 2003 [20], while other studies revealed positive impacts of religious diversity on HDI of 2014 [16,17].

As greater diversity may be associated with more varied human skills and resources it is reasonable to expect some impacts of it on the innovative capacity or competitiveness of a country. Such analyses were done by Ogden et al. [21], who found that cultural diversity of employees has a positive partial correlation with product innovation. Hlepas et al. [22] showed that many highly developed countries are often quite homogeneous, and underdeveloped countries are often homogeneous. He argues, that the Global Competitiveness Index (GCI) may be a better indicator of economic performance than GDP/capita, as the latter measures only production and consumption, while GCI can reveal other important components and capacities of a country, which may explain lower or higher GDP values. DiRienzo et al. [23] found the effect of ethnic fractionalisation negative and linguistic fractionalisation positive on the Global Competitiveness Index, while religious fractionalisation was insignificant. Positive impacts of diversity were established on tourism competitiveness [24] in 2007 while others found ethnic [25], and linguistic fractionalisation impacts of diversity were established on tourism competitiveness [24].

Index, while religious fractionalisation was insignificant. Positive linguistic fractionalisation positive on the Global Competitiveness Index, while religious fractionalisation was insignificant. Positive impacts of diversity were established on tourism competitiveness [24] in 2007 while others found ethnic [25], and linguistic fractionalisation impacts of diversity were established on tourism competitiveness [24].

Data, methodology and objective

Objective: As the literature review indicated in Section 1, most of the former research results show negative effects of diversity on GDP per capita or on the growth rate of GDP per capita, and mixed results on HDI. There is a general feeling, that variety may have as many advantages as disadvantages. However, most of the empirical analyses show the opposite. The advantageous impacts, however, may depend on certain internal conditions of the countries analysed, that can be captured by control variables; or may manifest themselves through dependent variables other than GDP per capita or its growth. The objective of the present paper is to assess the impacts of ethnic, cultural and religious diversity on GNI per capita, HDI and GCI, using the same set of control variables suggested by the recent literature. A secondary objective is to see whether these impacts are similar or different for more affluent countries, that may be better prepared to handle problems arising from heterogeneity.

Data: The current paper examines the impacts of diversity on various aspects of development and the quality of life. For measuring the quality of life in the Human Development Index values were available for 2010-2014 by UNDP [34]. The level of economic development was measured by the per capita values of GNI.
For measuring the impact of various types of diversity earlier research datasets were applied. Ethnic, religious and cultural fragmentation indices were taken from Alesina et al. [5] for 2001, while linguistic fractionalisation was measured by the LDI index provided by Ethnologue for 2014 [32]. For religious fractionalisation the index computed by Bacsi et al. [16,17] was applied, relying on data for 2010 from the Pew Research Center [33], together with an index developed by Alesina et al. [5] for 2001 data. The notations and variables are presented below.

Diversity indices:
- LDI: linguistic fractionalisation - based on language data for 2014 [32]
- RFIPew: Religious fractionalisation index based on data by Pew Research Center for the year 2010 [16,33].

Output variables of quality of life, competitiveness and economic performance:
- HDI: the Human Development Index published by UNDP [34]
- GCI: the Global Competitiveness Index [37], or more precisely, its natural logarithm for 2014.
- HDI: the Human Development Index published by UNDP [34]

Control variables:
- Pop%: population in 2014 expressed as percentage of the world total population [38];
- Area%: the total area of the country expressed as percentage of the world total area [35];
- IndYear: the year of the country attaining independence [39];
- Lit: literacy rate measured as the number of literate persons per 1000 adults [34];
- PriEd%, SecEd%, TerEd%: primary, secondary, tertiary net school enrollment rates for the year 2014, as % of the relevant age group [37];
- EcFree: the index of Economic Freedom [40].

Methodology:
A cross-country analysis of 155 countries was attempted. However, due to data availability, analyses have occasionally been restricted to only 129 countries. First, all the variables are presented by descriptive statistics, and then simple Spearman-correlations are computed.

The impact of diversity is assessed by applying multiple regression analysis with the listed output variables as dependent variables, and diversity indicators and control variables as dependent variables.

As literature indicated that the more affluent countries are better prepared to utilise advantages and minimise harms of diversity, the same analyses are repeated restricting the range of countries to those having per capita GNI levels above USD13000.

Descriptive statistics and correlations
Descriptive statistics of the above indicators are presented in Tables 1-3. It is worth noticing that skewness and kurtosis data indicate a non-normal distribution for most of the diversity measures and output variables alike.

As is seen in Table 4, only the Economic Freedom index and the natural logarithm of GCI are of normal distribution. For this reason correlations are tested by Spearman’s rho value, presented in Table 5.

As is seen in Table 5, ethnic and linguistic diversity indicators are positively correlated to each other, the two religious diversity indicators are also positively correlated, but the ethnic and the linguistic diversity indices have only a weak - though still significant - positive correlation to religious diversity. Ethnic and linguistic diversity show medium negative significant correlation to the output variables, the religious diversity index of 2001 (RFA) does not

### Table 1: Descriptive statistics for fractionalisation and polarisation indices.

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Dev</th>
<th>Skewness</th>
<th>Kurtosis</th>
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</thead>
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<tr>
<td>EFIA</td>
<td>155</td>
<td>2001</td>
<td>0.0000</td>
<td>0.9302</td>
<td>0.4593</td>
<td>0.2560</td>
<td>-0.0810</td>
</tr>
<tr>
<td>LDI</td>
<td>155</td>
<td>2014</td>
<td>0.0000</td>
<td>0.9880</td>
<td>0.4612</td>
<td>0.3007</td>
<td>0.0500</td>
</tr>
<tr>
<td>RFA</td>
<td>155</td>
<td>2001</td>
<td>0.0023</td>
<td>0.8603</td>
<td>0.4377</td>
<td>0.2314</td>
<td>-0.1830</td>
</tr>
<tr>
<td>RFIPew</td>
<td>155</td>
<td>2010</td>
<td>0.0020</td>
<td>0.7920</td>
<td>0.2926</td>
<td>0.1940</td>
<td>0.2890</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
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<th>Std. Dev</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>PR_Pew</td>
<td>155</td>
<td>2010</td>
<td>0.0000</td>
<td>0.2500</td>
<td>0.1230</td>
<td>0.0725</td>
<td>-0.0500</td>
</tr>
</tbody>
</table>

### Table 2: Descriptive statistics for control variables - All data are for 2014.

<table>
<thead>
<tr>
<th></th>
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<th>Mean</th>
<th>Std. Dev</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pop%</td>
<td>151</td>
<td>0.01</td>
<td>19.05</td>
<td>0.65</td>
<td>2.16</td>
<td>7.522</td>
<td>60.096</td>
</tr>
<tr>
<td>Area%</td>
<td>155</td>
<td>0.00</td>
<td>12.62</td>
<td>0.64</td>
<td>1.56</td>
<td>4.945</td>
<td>28.332</td>
</tr>
<tr>
<td>IndYear</td>
<td>155</td>
<td>0</td>
<td>1993</td>
<td>1785.54</td>
<td>418.83</td>
<td>8.229</td>
<td>59.229</td>
</tr>
<tr>
<td>Literacy</td>
<td>155</td>
<td>191</td>
<td>1000</td>
<td>845.94</td>
<td>188.57</td>
<td>1.081</td>
<td>1.081</td>
</tr>
<tr>
<td>PriEd%</td>
<td>131</td>
<td>40.81</td>
<td>100.00</td>
<td>90.89</td>
<td>10.26</td>
<td>-2.082</td>
<td>5.245</td>
</tr>
<tr>
<td>SecEd%</td>
<td>133</td>
<td>24.68</td>
<td>131.29</td>
<td>79.04</td>
<td>26.91</td>
<td>-0.535</td>
<td>-0.773</td>
</tr>
<tr>
<td>TerEd%</td>
<td>132</td>
<td>0.82</td>
<td>103.11</td>
<td>37.51</td>
<td>27.00</td>
<td>0.389</td>
<td>-1.016</td>
</tr>
<tr>
<td>EcFre</td>
<td>155</td>
<td>0.00</td>
<td>89.40</td>
<td>57.79</td>
<td>16.20</td>
<td>-1.895</td>
<td>5.103</td>
</tr>
</tbody>
</table>
correlate to output variables at all, while the religious diversity index of 2010 (RFIPew) is positively correlated to each output variable.

**Impacts of diversity on competitiveness, quality of life and income**

As former research suggests, diversity influences income levels, economic growth, HDI and competitiveness. However, these impacts considerably differ according to the structure of multiple regression models, and especially on the set of control variables applied. Therefore the present analysis applies the same model structure with the same set of control variables, to create comparable results.

Four model versions were defined, applying the same set of control variables, listed in Section 2.1:

- **Model 1:** Dependent: logGCI, independent diversity indicators: EFIA, LDI, RFIPew
- **Model 2:** Dependent: logGCI, independent diversity indicators: EFIA, LDI, RFA
- **Model 3:** Dependent: HDI, independent diversity indicators: EFIA, LDI, RFIPew
- **Model 4:** Dependent: logGNI, independent diversity indicators: EFIA, LDI, RFIPew

Multiple regression results are presented in Table 5 for all the countries, and in Table 6 for restricting the sample to high-income countries.

First, the multiple regression estimations were done with all the countries for which the full set of variables were available, i.e. for 129 countries. Then, following the example of Patsiurko et al. [10,11] the multiple regression estimations were done separately for high-income countries with the same model setup of diversity and control variables.
variables. Countries were classified into three groups: the group of high-income economies included countries with GNI per capita values above USD13000 (measured as PPP), a low-income group with GNI per capita under USD4000, and a medium-income group with GNI per capita between USD4000 and USD13000. The value USD4000 is about the upper limit for lower middle income countries according to the classification of the World Bank, and USD13000 is approximately the lower limit for high income countries [36]. For the low-income and medium-income group no significant relationships were identified.

Results - All countries

The results of the regression analyses are presented in Table 6. In all the four model versions linguistic diversity had significant positive impact on competitiveness (LogGCI), quality of life (HDI) and income (LogGNI), while neither ethnic fractionalisation, nor religious fractionalisation showed any significant impacts. Using either of the two religious fractionalisation indices (RFA and RFIPew) resulted in very similar model parameters fo rLog GCI as output, which is somewhat surprising, as RFA describes a religious situation 10 years before the other diversity index, and 15 years before the output variables. As Figure 1 shows, the religious situation, and therefore the religious indices do differ, but being insignificant, their difference does not show in model results.

Among the control variables the size of population, the level of economic freedom, and the three school enrollment rates had positive significant impact on competitiveness, while year of independence had significant negative impact, and area had no effect at all. Taking HDI as dependent variable, population had no impact, year of independence had negative significant impact, and all the other control variables had positive significant impacts on it. Finally, population, independence year and primary school enrollment rate did not have any impact on LogGNI, while the rest of the control variables had positive significant impact.

The strength of the regression models was quite high, adjusted R² values were above 0.80 for each model version.

Results - high-income countries

For high-income countries results are different (Table 7). Similar to the all-countries models, linguistic fractionalisation showed positive significant impacts on all the dependent variables, while for high-income countries ethnic diversity produced negative significant impacts on competitiveness and income, of about half the magnitude of the language fractionalisation effect. Religious fractionalisation had no impact, and Model 1 and Model 2 resulted in nearly the same parameter values though they use different religious fractionalisation indices.

The impacts of control variables on competitiveness are different from the all-countries-models. Only the role of population (significant positive) and of independence year (significant negative) are similar. None of the school enrollment rates played any significant role in influencing competitiveness.

Looking at HDI as dependent variable, among the control variables only secondary school enrollment, tertiary school enrollment, and index of economic freedom did have significant and positive impacts, which is again different from the all-countries model results.

For GNI as dependent variable, among the control variables only secondary school enrollment and index of economic freedom did have significant and positive impacts, the rest of the control variables did not matter.

Adjusted R² values were somewhat lower than for the all-countries models, but still high, above 0.70 except for the model for LogGNI, for which the adjusted R² value was 0.514.

Discussion

The present paper had a double objective. First, to assess the effects of ethnic, linguistic and religious diversity on the competitiveness,
income and quality of life of countries. The second objective was to compare the effects of diversity indicators on all countries to that of high-income countries. The analysis applied the same set of control variables.

Four model versions were set up, for 3 different dependent variables. The models were applied for 129 countries of a database of 155 countries - limitations were due to missing data of some of the control variables. A subset of high-income countries - having higher GNP per capita in 2014 than USD13000 - was analysed separately, too. All the models showed a medium to strong value of adjusted R² indicating a strong relationship. The diversity indices used in the present analysis were based on data about the language diversity of the world in 2014, religious diversity in 2010 and in 2001, and ethnic diversity based on data from 1985-2000. This list shows, that while language and religious diversity data were relatively new, ethnic diversity was measured by data of 20-30 years before.

The results of the present research show the following facts.

**Effects of language diversity**

Linguistic diversity showed a significant positive effect on competitiveness, income and quality of life, regardless of the model setup and control variables. This is fully in line with DiRienzo et al. [23], who also found a significant positive impact of language fractionalisation on competitiveness for 2005. Our results show, that these relationships still hold 10 years later.

The positive impact of language diversity is in contrast with several other analyses establishing negative effects of language fractionalisation on competitiveness. The present study, however, does not take into account macroeconomic variables, such as the age of the population, which may influence the results.

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**Table 7: Regression statistics, high-income countries, model fit with VIF<5. Note: Beta is the standardised coefficient of the variable, sign(p) indicates the p-value of significance for Beta.**

<table>
<thead>
<tr>
<th>Model</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
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</thead>
<tbody>
<tr>
<td>Dependent</td>
<td>LogGCI</td>
<td>LogGCI</td>
<td>HDI</td>
<td>LogGNI</td>
</tr>
<tr>
<td>Independent</td>
<td>Beta</td>
<td>sign (p)</td>
<td>Beta</td>
<td>sign (p)</td>
</tr>
<tr>
<td>RFA</td>
<td>0.128</td>
<td>0.127</td>
<td>-0.126</td>
<td>0.691</td>
</tr>
<tr>
<td>RFIpew</td>
<td>-0.068</td>
<td>0.432</td>
<td>0.055</td>
<td>-0.126</td>
</tr>
<tr>
<td>EFIA</td>
<td>-0.239</td>
<td>0.033</td>
<td>-0.213</td>
<td>0.000</td>
</tr>
<tr>
<td>LD</td>
<td>0.447</td>
<td>0.000</td>
<td>0.423</td>
<td>0.000</td>
</tr>
<tr>
<td>Controls</td>
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</tr>
<tr>
<td>Pop%</td>
<td>0.227</td>
<td>0.003</td>
<td>0.249</td>
<td>0.001</td>
</tr>
<tr>
<td>Area %</td>
<td>-0.016</td>
<td>0.840</td>
<td>-0.015</td>
<td>0.843</td>
</tr>
<tr>
<td>Ind Year</td>
<td>-0.166</td>
<td>0.036</td>
<td>-0.164</td>
<td>0.034</td>
</tr>
<tr>
<td>Lit</td>
<td>0.076</td>
<td>0.427</td>
<td>0.092</td>
<td>0.329</td>
</tr>
<tr>
<td>PrimEd %</td>
<td>0.105</td>
<td>0.225</td>
<td>0.077</td>
<td>0.363</td>
</tr>
<tr>
<td>SecEd %</td>
<td>0.111</td>
<td>0.213</td>
<td>0.117</td>
<td>0.178</td>
</tr>
<tr>
<td>TertEd%</td>
<td>0.062</td>
<td>0.571</td>
<td>0.033</td>
<td>0.753</td>
</tr>
<tr>
<td>EcFre</td>
<td>0.657</td>
<td>0.000</td>
<td>0.69</td>
<td>0.000</td>
</tr>
<tr>
<td>AdjR²</td>
<td>0.72</td>
<td>0.73</td>
<td>0.792</td>
<td>0.514</td>
</tr>
<tr>
<td>F</td>
<td>15.029</td>
<td>15.727</td>
<td>21.771</td>
<td>6.77</td>
</tr>
<tr>
<td>df1</td>
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<td>11</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>df2</td>
<td>49</td>
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<td>sign (p)</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
</tbody>
</table>

**Figure 1: The relationship of the RFA and RFIpew religious fractionalisation indices.**
were established by Alesina et al. [5], Desmet et al. [27,30]. Negative HDI by Bacsi et al. [17], negative impacts on growth of GDP per capita economic performance, no impacts were found on GNI per capita or as the present research shows, the negative impacts seem to have effects of ethnic fractionalisation on competitiveness in 2005. Thus, to these results, DiRienzo et al. [23] found significant negative impacts for high-income countries. In contrast on any of the output variables for all the analysed countries, but no impact of religious fractionalisation was found on the Travel and Tourism Competitiveness Index [24,25] and on public spending and government transfers [12,27,30].

The results on the high-income countries are surprising, as relying on Easterly et al. [7] one would expect, that ethnic diversity is more of a problem in low-income countries. However, our results show significant negative impacts in high-income countries, except for HDI as output variable. Patsiurko et al. [10,11] also found negative effects of ethnic diversity on the growth of GDP in the group of highly developed countries.

Developed countries can handle language diversity and the associated pool of varied human resources, but they seem not to tolerate ethnic differences well. This raises the issue of how ethnic diversity is revealed: it may be revealed by language, which is a resource, as long as the majority language is spoken by all. However, ethnic identity emphasised separate from language may work as a discriminating factor.

These disturbing results deserve more concern, as data availability is a problem in assessing ethnic diversity. Most of the ethnic, or ethnolinguistic data series heavily rely on linguistic differences, some studies directly use linguistic data for estimating them. The currently used datasets that consider not only language differences but racial traits and cultural traditions - i.e. inherited and learned features - go back to the 1985-2000 period. Little is known about the true changes of ethnic patterns ever since.

**The impact of control variables**

All our model versions used the same set of eight control variables. Their effects differed according to the dependent variables LogGCI, HDI and LogGNI. The effects of control variables also showed different patterns in high-income countries from the all-countries analysis. Population had an important positive effect for LogGCI, for all the countries, and for the high-income countries, separately. This means that more populous countries tend to be more competitive. However, this was not an advantage in the quality of life and in the income level of countries. Area, the other measure of country size, was not an advantage for competitiveness, but a benefit for quality of life and income. Strangely, this positive impact disappeared in high-income countries. The larger area may provide better natural resources, but this is obviously not an important factor in affluent countries. The negative effects of the date of independence indicate that the longer history of independence is an advantage in competitiveness, but less important for quality of life and not important at all for income. This latter effect may be explained by the fact, that colonisation might have created global trade relationships, which may be lost with independence, hindering the growth of per capita GNI.

Either literacy rate or primary school enrollment had a positive effect in the all-countries models, indicating the importance of basic education, but their relevance disappeared in high-income countries. Obviously, in these countries basic education is so general that its minor differences cannot have any effect on development. Secondary and tertiary school enrollment rates are also of positive impact in the all-countries models, but they do not have any impact on competitiveness in high-income countries. The higher levels of schooling enhance the quality of life and the income level, but they do not create a competitive advantage in affluent countries.

The impact of economic freedom was positive in every model version, greater economic freedom increases competitiveness, quality
of life and income alike, but being a composite indicator, in many aspects are related to these development indicators this relationship is not surprising at all.

**Conclusions and Further Research Questions**

Our analyses showed, that diversity can have significant impacts on the level of development. The most general conclusion is the positive effect of language diversity, which is valid for all aspects of development and for rich and poor countries alike. Religious diversity did not present any effects, but in spite of this, its impacts may be manifested through other variables - as population size, education level, or language and ethnic affiliation. The effects of ethnic diversity are rather controversial, neither negative or positive overall effects were detected, but in rich countries negative effects were identified on competitiveness and income levels. Therefore in rich countries ethnic conflicts may create animosity which makes exchange of ideas and cooperation more difficult. In less affluent countries this impact is not noticeable - probably because more severe problems make it less visible. Another point is, that our results are based on ethnic diversity measured more than 20 years ago - so what we can only say, that ethnic diversity of the society creates negative impacts on the economic performance two decades later, i.e. for the next generation. This fact points to the need for further research about the ethnic cleavages of societies. More precise results could not be expected without establishing newer datasets for ethnic structures, that are based not only on language but on true ethnic affiliation, taking into account the similarities and differences between ethnic groups.

**References**


