COLLECTIVISM AND ECONOMIC DEVELOPMENT –
A CAUSAL ANALYSIS
Kolektivizam i ekonomski razvoj – uzročno-posledična analiza

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Abstract

Does collectivism – contrary to Adam Smith’s opinion – cause faster economic development? The paper argues in favour of the thesis that there is a positive, causal relation between the collectivist orientation of culture and economic development. I apply two approaches to support the hypothesis. First, I analyze the mechanisms relating the individualism/collectivism dimension of culture to economic growth. Second, I apply Wiener’s definition of causality to the problem under consideration and estimate econometric models based on the example of EU member states.

Keywords: Collectivism, Individualism, Economic Growth, Economic Development, Collectivist Orientation

1. Introduction

Classical economists believed that individual behaviours are driven by egoism and self-interest (Smith 2007). Rationality and profit maximization have constituted the assumptions for over two centuries despite some criticism. For instance, Weber (1904) suspected that culture influences economic growth. However, in spite of Hofstede’s (1980) Culture’s Consequences, most scholars interested in development economics thought that it is individualism that fosters growth and efficiency, because people raised
in collective cultures were believed to substitute the need for achievements for the affiliation need (e.g.: Peterson 1980, McClelland 1976, Hofstede 1991).

A positive correlation between collectivism and economic growth was discovered in the nineties. For example, Kellner (1994), who analysed why British economy was not growing fast enough, calculated the correlation coefficient between the level of individualism (measured by Hofstede (1980) and GDP growth in the group of 18 most developed countries (r=-0.67), concluding that a high level of employees’ individualism may be the cause.

The diversity of opinion among scholars whether collectivism supports or hinders economic growth highlights the necessity to further examine this relation. Therefore, I attempt to discover whether there is a causal relation between collectivism and economic growth. Two ways of discovering cause and effect relationships were applied in the research.

First, causal realism states that the relation between cause and effect exists in reality, i.e. outside and independently of the knowing subject. Realism (in general) is well understood by one of the characters of Milne’s story (Maziarz 2013). Christopher, asked by Pooh what the North Pole is, answers that it is something to be discovered (Milne 2014). Causal realists believe that a causal relationship between X and Y exists if and only if there are causal mechanisms connecting these events. A concept of mechanism can be easily understood in the case of physics. But what does it mean in social sciences? Little (1991) defines the concept of causal mechanism as a sequence of events, conditions and processes leading from cause to effect. On the other hand, Stinchcombe (1991) considers mechanisms to be bits of theory about entities at a different level (e.g., individuals) than the main entities being theorized about, (e.g., groups), which serve to make the higher-level theory more supple, more accurate, or more general.

Second, Hume (1739) and his followers state that the human mind cannot differentiate between causal relations and mere correlations. For instance, a pool ball A hits ball B and the latter moves. People can only see one event at a time, so it is impossible to deduce from observation that these events are causally related (Hoover 2004). How can we discover whether a relation is causal or not? Wiener (1956), obviously inspired by the Humean, sceptical tradition, defines causality in terms of additional information provided by the cause: For two simultaneously measured signals, if we can predict the first signal better by using the past information from the second one than by using the information without it, then we call the second signal causal to the first one.

These two ways of discovering causal relations are applied to examine whether a higher level of collectivism causes faster economic development. In Section 2, I define collectivism and individualism, address the question how can we measure this cultural dimension, and describe economic manifestations of the former and the latter. Next, I focus on mechanisms connecting society’s orientation on collectivism and economic development. The review of literature shows that there are at least four such mechanisms. In Section 4, I argue for the thesis that collectivism fosters creativity by conducting an econometric analysis. It consists of three econometric models that quantitatively describe the relation between collectivism (measured in two ways) and the pace of economic growth.

Finally, I conclude the analysis and suggest areas of application. The paper contributes to the literature mainly in two ways. First, the method is novel in the field. Second, the econometric research is based on an example of European Union member
states. Previous analysis focused either on a selected group of countries from all around the world, or on a geographic region where the level of collectivism or individualism is known to be high (such as South-East Asia).

2. Individualism and collectivism

In order to conduct further analysis, it is necessary to define the concepts of collectivism and individualism due to substantive differences in understanding these terms in the literature. The former is understood in terms of one’s belonging to a group and striving after the group’s goals before their personal ones. Realo (et al. 2008) states that collectivism considers a group (e.g. family, tribe, or state, as the primary unit of reality and requires that individuals sacrifice themselves for the alleged interests of the collective. Other features of collectivism are summed up in Table 1.

Table – 1. The features of collectivism.

<table>
<thead>
<tr>
<th>Scholars</th>
<th>Indicated features of collectivism</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stephen Knack and Philip Keefer</td>
<td>1. Community awareness</td>
</tr>
<tr>
<td>(1997)</td>
<td>2. Identification with the group</td>
</tr>
<tr>
<td></td>
<td>3. Emotional dependence on others</td>
</tr>
<tr>
<td></td>
<td>4. Group solidarity</td>
</tr>
<tr>
<td></td>
<td>5. Sharing responsibilities and privileges</td>
</tr>
<tr>
<td></td>
<td>6. Need for stability</td>
</tr>
<tr>
<td></td>
<td>7. Predetermined friendships</td>
</tr>
<tr>
<td></td>
<td>8. Group decisionmaking</td>
</tr>
<tr>
<td></td>
<td>9. Particularism</td>
</tr>
<tr>
<td>Fang Chen and Stephen West</td>
<td>1. Feeling unity with others</td>
</tr>
<tr>
<td>(2008)</td>
<td>2. Fundamental connection with others</td>
</tr>
<tr>
<td></td>
<td>3. Focusing on relationships</td>
</tr>
<tr>
<td></td>
<td>4. Interpersonal orientation</td>
</tr>
<tr>
<td>James Tiessen (1997)</td>
<td>1. Absence of conflict within the group</td>
</tr>
<tr>
<td></td>
<td>2. Harmonious cooperation within the group</td>
</tr>
<tr>
<td></td>
<td>3. Expecting conflict in contacts with others</td>
</tr>
</tbody>
</table>

Source: Own calculations.

Opinions whether collectivism and individualism constitute a single cultural dimension, being in opposition to one another, or rather constitute a multidimensional concept are divided. Earley and Gibson (1998), Ho and Chiu (1994) and Schwartz (1990) provide examples of argumentation supporting the former. On the other hand, Erez and Earley (1987), Hui (1988) and Wagner (2002) present the opposite point of view.

Further in the paper I treat collectivism and individualism as opposing concepts within a single cultural dimension. This is grounded in the tradition of previous economic studies and data accessibility (i.e. there are no indicators of individualism and collectivism treated separately that include all or most EU countries).

Therefore, individualism has an opposite meaning to collectivism. Individualist societies appreciate independence, autonomy, uniqueness, achievements, competition and taking responsibility for one’s actions (Green et al. 2005). Hui and Triandis (1986), who analysed how psychologists and anthropologists understand ‘individualism’, define it as a feeling or conduct in which the guiding principle is the interest of the individual. Tiessen (1997) names such features as achievement-orientation, self-interest, social power, stimulation.
Table – 2. The features of individualism.

<table>
<thead>
<tr>
<th>Scholars</th>
<th>Indicated features of individualism</th>
</tr>
</thead>
</table>
| Fang Chen and Stephen West (2008) | 1. Independence  
2. Competitiveness  
3. Uniqueness |
| Eva Green et al. (2005)       | 1. Independence  
2. Autonomy  
3. Uniqueness  
4. Achievement orientation  
5. Competing;  
6. Being responsible for one’s actions. |
| James Tiessen (1997)          | 1. Need for achievement  
2. Self-interest  
3. Clout  
4. Stimulaiton |

*Source: Own calculations.*

As long as my goal is to show that the collectivist orientation fosters economic development, I need to demonstrate that differences between collectivism and individualism are not limited to the values appreciated in society, but manifest themselves in social and economic life. First, Realo (et al. 2002) points out that the level of trust is higher in collectivist societies. Second, Ketkar (et al. 2012) observed stronger social ties in these cultures. Ball (2001) concludes from presented evidence that groups in collectivist societies can perform the functions of the welfare state. Therefore, countries where collectivist culture dominates can reduce social expenditures (Siewierski 2012). In addition, groups take over other tasks from the state. For instance, they take care of the elderly, so that spending in a collectivist culture is lower.

Diagram – 1. Positive correlation between collectivism and spending on care of elderly people.

*Source: Own calculations.*
One of the stages of the analysis is to choose an appropriate measure of collectivism. There were over 60 attempts to measure orientation on collectivism or individualism made during the last three decades. However, only two of them describe the level of collectivism in every (IND/COL) or most (IC) European countries. The former was constructed by Hofstede (1980). IND/COL is an indicator that is most often applied to economic research. IC was constructed by a group of psychologists (Diener et al. 2000). These two measures are sparsely correlated (r=0.485, p=0.026, cf. Graph 2), which underlines the necessity and importance of the choice. Hofstede’s IND/COL faced some criticism. For instance, Johnson and Lenartowicz (1998) point out a negative correlation with the level of community involvement. Chen and West (2007) simply state that IND/COL is connected with career goals rather than with the dimension of culture that was supposed to be measured. Therefore, I decided to use Green’s IC indicator.

**Diagram – 2. Positive Scatterplot: IC and IND/COL..**

*Source: Own calculations.*

**Diagram – 3. Scatterplot diagram: IC and social expenditure per capita.**
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Table – 3. Comparison of IC and IND/COL values for EU countries.

<table>
<thead>
<tr>
<th>Scholars</th>
<th>Indicated features of individualism</th>
</tr>
</thead>
</table>
| Fang Chen and Stephen West (2008) | 4. Independence  
|                      | 5. Competitiveness  
|                      | 6. Uniqueness  |
| Eva Green et al. (2005) | 7. Independence  
|                      | 8. Autonomy  
|                      | 9. Uniqueness  
|                      | 10. Achievement orientation  
|                      | 11. Competing;  
|                      | 12. Being responsible for one’s actions.  |
| James Tiessen (1997)  | 5. Need for achievement  
|                      | 6. Self-interest  
|                      | 7. Clout  
|                      | 8. Stimulaiton  |

Source: Diener et al. (2000) and Hofstede (1980).

What is more, the individualism-collectivism dimension of culture can be approximated by certain macroeconomic variables. Ball (2001) shows that the more collectivist the culture, the less the state spends on social expenditure (per capita).

3. Mechanisms

In this section, I analyze the causal mechanisms and demonstrate how collectivism fosters economic development. There are four such ways, namely: more efficient relations between economic actors, adherence to norms of social and economic life, sense of personal security and higher innovativeness.
More efficient relations

One of the features of collectivist cultures is an individual’s feeling of connection with others (Chen and West 2008). It makes members of a group identify with common goals and work as hard as if those goals were their own. Ramamoorthy (et al. 2007) analyzed efficiency and motivation in a collectivist and an individualist country and concluded that those employed in the latter were more engaged, because the exchange between the employee and the employer is not limited to a transactional approach but includes higher engagement and effort, which improves productivity.

However, the above conclusions are not limited to the relation between the employee and the employer. Kanck and Keefer (1997) show that a higher level of loyalty to other group members, which is observed in collectivist cultures, prevents economic partners from engaging in counterproductive activities. In collectivist societies, agreement terms are kept more often, which makes it possible to reduce the degree of formalization of economic life. The presence of a favour bank (such as one described in The Bonfire of the Vanities, Putnam 2013) is helpful in cutting through the red tape.

Despite the voice of Wagner (1995) who states that collectivist oriented people trust only members of their group and are less trustful than individualists when it comes to other people (i.e. those outside their group), business relations are more durable in collectivist cultures, because most surveyed people state that they constitute a group with their business partners (Ketkar et al. 2012). Therefore, such relations are not only contract-driven in collectivist oriented countries. In addition, business transactions are conducted in a more direct way in these societies. Face-to-face communication is known to raise engagement of business partners and makes compliance with transaction terms more likely. Taking into account the findings of Tiessen (1997), I can conclude that the quality of business relations, higher in collectivist cultures, contributes to an efficient use of resources and, finally, economic development.

Adherence to norms of social and economic life

Collectivism implies one’s feeling of connectedness with other people. which discourages one from behaving in an egoistic fashion. Therefore, people raised in collectivist cultures are more emphatic and their behaviour agrees with the society’s ethical norms to a greater degree (Chen and West 2008). The fact that collectivism hinders egoistic behaviors was observed by many scholars. Cobb (1983) and Naroll (1983) discovered the relation between individualism and criminality: the more individualist the society, the greater the number of crimes. The most likely cause of this connection is one of the features of collectivist oriented societies. Namely, people who live in such countries are more likely to adhere to social norms (Cobb 1976).

Therefore, collectivism may foster economic development, because choices taken in such societies are more efficient due to the fact that a coordination problem, such as that described by the prisoner’s dilemma, is less likely to occur. What is more, transaction costs are lower in collectivist oriented economies as a result of the fact that business partners are more expected to adhere to terms of agreements. Huff and Kelley (2005) analyzed the relation between collectivism individualism and competitiveness in six Asian and two American states and support this point of view: The likelihood that collectivists will engage in opportunistic behaviour is low because people hold group values and beliefs and seek collective interests.
Improved security

On the one hand, belonging to a group in a collectivist culture forces the individual to adhere to social norms. On the other hand, it is related to benefits. Other members of the group offer help, because solidarity is one of the features of such cultures (Cobb 1983). One of the ways members of a group help is by offering aid in finding and keeping a job (Knack and Keefer 1997). In collectivist economies the average period of employment is longer than in individualist ones (Gomez-Mejia and Wellbourne 1991).

However, help from the group is certainly not limited to one’s workplace. In collectivist societies, the poor receive sustenance from other members, which influences the economic development in a positive way due to the lower cost of such help in comparison with welfare state expenditures (Ball 2001). In collectivist oriented countries, some of the functions of the contemporary state (e.g. social expenditures, pension insurances) are taken over by group members.

Higher innovativeness

Economists used to think that the characteristics of individualism, such as the desire to distinguish oneself from others and the goal orientation, foster innovativeness. However, the opposite may be argued. Ball (2001) states that it is collectivism that fosters innovativeness. Hurley (1995) justifies such observations by more fruitful cooperation and the support received by innovators.

Power (et al. 2010) analyzed investments in developing Asian countries and highly developed ones and concluded that investments in soft production factors are more common in the former (i.e. collectivist ones). On the other hand, in individualist oriented economies, people choose to invest in fixed assets. As one can suspect, the higher quality of human capital fosters innovativeness.

Another important difference is that in collectivist cultures there is a preference for process investments (Vecchi and Brennan 2009), which are known to be less risky, because the level of demand is not uncertain as in the case of novel products. In addition, Zack and Knack (2001) deduce from the general equilibrium theory that collectivist oriented societies consume less, but save and invest a greater part of their incomes.

4. Econometric analysis

In the previous section, I demonstrated that there exist possible causal mechanisms which relate collectivism to the pace of economic development. Now, I present an analysis to discover whether the relation is strong enough to be observable. The research is based on an example of economies belonging to the European Union due to several reasons. First, the level of the dimension analyzed is less differentiated in this group than in the case of previous studies. Most scholars who examined the subject previously chose samples that consisted of a selected number of cases worldwide or a few examples of countries belonging to collectivist and individualist cultures. In spite of lower differentiation, the analysis shows significant results. Second, the sample that consists of EU member states has one important advantage. Namely, it substantially diminishes the influence of other determinants of the pace of economic development.

The data used to build the econometric model was collected by Eurostat (macroeconomic indicators) and Diener (et al. 2000), who worked out the measure of individualist/collectivist orientation. The IC indicator is based on the World Values
Survey (WVS II). The macroeconomic data was preprocessed by calculating averages over time (for years 2002-2012).

The calculated correlation coefficient between IC and the pace of GDP growth is statistically significant and shows that the economy develops (r=-0.699; p=0.004). The same conclusion may be drawn from the coefficient calculated for the last two decades (1992-2012) (r=-0.659; p=0.001).

Diagram – 4. Scatterplot showing the relation between GDP growth in 2002-2012 and IC.

Diagram – 5. Scatterplot showing the relation between GDP growth in 1992-2012 and IC.
In order to discover whether the above relation is casual, I estimated two linear regression equations using the method of least squares. The first one is the popular model of growth (Barro 1996), where economic development is determined by eight variables, i.e. the level of education, life expectancy, fertility, government consumption, quality of law, inflation, terms-of-trade. Due to the limited number of instances (21), there are only three variables statistically significant. In accordance with Model 1, the pace of GDP growth is determined by schooling, government consumption and life expectancy.

Table – 3. Model 1: Least squares estimation, 21 instances.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. error</th>
<th>t-Student</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>schooling</td>
<td>-0.0220095</td>
<td>0.00824702</td>
<td>-2.6688</td>
<td>0.01343 **</td>
</tr>
<tr>
<td>gov_consumption</td>
<td>-0.0555501</td>
<td>0.0203975</td>
<td>-2.7234</td>
<td>0.01185 **</td>
</tr>
<tr>
<td>life_expectancy</td>
<td>0.0626773</td>
<td>0.0133401</td>
<td>4.6984</td>
<td>0.00009 ***</td>
</tr>
</tbody>
</table>

Arithm. mean of the dep. v. 1,611276  Std. dev. of the depend. v. 0,572907
Sum of sq. of the residuals 6,826491  Std. dev. of the residuals 0,533326
Determination coeff. R2 0,913184  Adjusted R2 0,905949
F(3, 24) 84,14862  p-value of the F test 7,08e-13
Log-likehood ratio -19,74849  AIC 45,49697
Schwarz bayes. crit. 49,38449  HQC 46,65294

Source: Own calculations.

Next, I added the fourth variable (IC) that describes the level of individualist orientation in every country (i.e. the higher the IC, the more individualist the culture). In accordance with Wiener’s (1956) definition of causality**, a given variable can be said to be the cause of another variable if attaching it to the model raises the fit of the model. That is, if adding the IC to the set of variables (known as other causes) raises the coefficient of determination (R2) and reduces information criteria (e.g. Akaike information criterion), I can conclude that the IC is a cause of the pace of GDP growth, because as long as it improves the quality of predictions, it contains additional information (Maziarz 2015).

Table – 4. Model 2: Least squares estimation, 21 instances.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. dev.</th>
<th>t-Student</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>IC</td>
<td>-0.19767</td>
<td>0.0949761</td>
<td>-2.0813</td>
<td>0.05284 *</td>
</tr>
<tr>
<td>gov_consumption</td>
<td>-0.0391033</td>
<td>0.0221254</td>
<td>-1.7673</td>
<td>0.09511 *</td>
</tr>
<tr>
<td>life_expectancy</td>
<td>0.0666898</td>
<td>0.0126215</td>
<td>5.2838</td>
<td>0.00006 ***</td>
</tr>
<tr>
<td>schooling</td>
<td>-0.0165835</td>
<td>0.00927101</td>
<td>-1.7888</td>
<td>0.09149 *</td>
</tr>
</tbody>
</table>

Arithm. mean of the dep. v. 1,619325  Std. dev. of the depend. v. 0,583809
Sum of sq. of the residuals 3,942063  Std. dev. of the residuals 0,481545
Determination coeff. R2 0,913184  Adjusted R2 0,925057
F(4, 17) 62,46718  p-value of the F test 6,13e-10
Log-likehood ratio -12,23312  AIC 32,46623
Schwarz bayes. crit. 36,64432  HQC 33,37299

Source: Own calculations.

** For two simultaneously measured signals, if we can predict the first signal better by using the past information from the second one than by using the information without it, then we call the second signal causal to the first one.
As you can see, Model 2 with the additional variable fits the data better. First, the coefficient of determination is higher (R²=0.936 in comparison with 0.913). Second, the Akaike information criterion is lower (AIC=32.37 compared to 49.5). What is more, the specification is appropriate. First, the White test shows that residuals are homoscedastic (p=0.0103). Second, the distribution of the dependent variable is Gaussian (the Jarque-Bera test p=0.32). Therefore, it is justified to conclude that IC causes the pace of GDP growth. On average, one point raise of individualism (measured with the IC indicator) causes the economy to grow by 1.82 percent point more slowly every year, cf. Model 2. That is, a one-point stronger collectivist orientation causes the economy to develop 20% more within a decade.

Then, in order to corroborate the above findings, I exchanged the measure of individualism/collectivism based on the WVS survey (IC) with a value of government social expenditure per capita that is positively correlated with the collectivist orientation, which was previously discussed.

Table – 4. Model 3: Least squares estimation, 21 instances.

<table>
<thead>
<tr>
<th>Coefficient</th>
<th>Std. dev.</th>
<th>t-Student</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>schooling</td>
<td>-0.0207941</td>
<td>0.0067069</td>
<td>-3.1004</td>
</tr>
<tr>
<td>government_consumption</td>
<td>-0.0570442</td>
<td>0.0176933</td>
<td>-3.2240</td>
</tr>
<tr>
<td>life_expectancy</td>
<td>0.0679185</td>
<td>0.0118951</td>
<td>5.7098</td>
</tr>
<tr>
<td>social_exp_pc</td>
<td>-6.41021e-05</td>
<td>3.11139e-05</td>
<td>-2.0602</td>
</tr>
</tbody>
</table>

| Arithm. mean of the dep. v. | 1.555494 | Std. dev. of the depend. v. | 0.492208 |
| Sum of sq. of the residuals | 2.748714 | Std. dev. of the residuals | 0.402106 |
| Determination coef. R2 | 0.950613 | Adjusted R2 | 0.941897 |
| F(4, 17) | 81,80433 | p-value of the F-test | 7.14e-11 |
| Log-likehood ratio | -8.447123 | AIC | 24.89425 |
| Schwarz bayes. crit. | 29.07234 | HQC | 25.80100 |

Source: Own calculations.

This model too shows that collectivism significantly fosters economic development. The coefficient of determination is higher in this case than in the case of the Barro model (R²=0.95 in comparison with 0.913). The Akaike information criterion shows that the model with the added variable fits the data better, too (AIC=24.9 in comparison with 49.5). In addition, the White test (p=0.13) and the Jarque-Bera test for normality (p=0.71) show that the model is well specified. These two measures of collectivist orientation show that there is a causal relation between collectivism and economic development.

4. Conclusions

In this paper, I argue for the thesis that it is the collectivist rather than the individualist orientation that fosters economic growth. There are two epistemic methods to discover whether the relation between collectivism and economic development is causal: analyzing mechanisms and applying Wiener’s definition to econometric modelling of these phenomenon. The overall conclusion based on the application of the
above approaches to causality shows that there is a causal relation between the collectivist orientation and the pace of economic development.

The results I obtained are important and practically useful when considered in connection to the modernization theory, which states that the more economically developed the country, the more individualist it becomes (Hamamura 2012). Then, as long as the collectivist culture fosters economic growth, it is advisable for economic policy to create an environment where people become more collectivist oriented or, at least, one that will stop the process of the culture’s reorientation towards individualism. Otherwise, economies of most developed countries may be hindered by a less and less collectivist society.

References


Apstrakt


Ključne reči: kolektivizam, individualizam, ekonomski rast, ekonomski razvoj, kolektivistička orijentacija