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Corruption perception, income level and growth in post-communist countries: evidence from panel data[1]

Summary

In this paper we use the corruption augmented Mankiw-Romer-Weil theoretical framework to study the empirical relationship between corruption perception, the level of per capita income and the rate of growth in post-communist countries. Our empirical study is based on the country-level panel data for 27 post-communist countries during the period 1994–2013. Our estimation results show that corruption perception is negatively related both to the level of per capita income and the rate of economic growth. However, only the relationship between corruption perception and the level of per capita income is statistically significant.

Keywords: corruption, growth, postcommunist countries, transition.

1. Introduction

Despite numerous complications associated with the clandestine nature of corruption, economic research has managed to shed some light on the likely general causes of corruption and its effects. The economic distortions caused by corruption have been already explored in the literature. Nevertheless, the overall effect of these distortions on growth is yet not well understood. While some findings claim that corruption improves efficiency, others see it as the biggest obstacle in the way of development. The conclusions that emerge from existing theoretical studies about the growth impact of corruption are conflicting. Thus, the issue is still far from being completely understood and explained.

[1] Artykuł przygotowany w ramach projektu „Determinanty i makroekonomiczne skutki korupcji w krajach Europy Środkowo-Wschodniej", finansowanego ze środków Narodowego Centrum Nauki, przyznanych decyzją nr 2013/09/B/HS4/01229.

Therefore, the main objective of this article is to investigate empirically the macroeconomic impact of corruption on the level of per capita income and the rate of economic growth in the countries of Central and Eastern Europe. In particular, we investigate two hypotheses derived from the formal neoclassical model. The first hypothesis concerns the negative impact of corruption on the level of per capita income in the steady-state in this group of countries. The second hypothesis is that corruption has a negative impact on economic growth along the transition to the steady-state. A robust empirical investigation and an effective hypothesis verification requires auxiliary or control hypotheses to be tested alongside the above stated main hypotheses. However, these control hypotheses differ between the two main hypotheses. Therefore, these two main hypotheses will be investigated in separate parts of the paper.

In this paper we use the corruption augmented Mankiw-Romer-Weil (MRW)[2] theoretical framework to study the empirical relationship between corruption perception, the level of income and the rate of growth in post-communist countries. Our empirical study is based on the country-level panel data for 27 post-communist countries during the period 1994–2015. Our estimation results show that corruption perception is negatively related both to the level of income and the rate of economic growth. However, only the relationship between corruption perception and the level of per capita income is statistically significant

The reminder of this paper is as follows. In Section 2 we survey the relevant literature. In Section 3 we discuss theoretical framework. In Section 4 we describe the dataset. In Section 5 we discuss empirical results. Section 6 summarizes and concludes.

2. Literature review

Of the theoretical works in the area of growth and corruption, the most noteworthy is Mauro[3] to produce two growth models. The key assumption in both models is that the probability of an individual act of corruption being detected and punished is decreasing in the overall level of corruption. This strategic complementarity gives multiple equilibriums that are used to explain high and low steady state levels of corruption. Comparative statics of the two models suggest that, other things equal, countries are

[2] N.G. Mankiw, D. Romer, D.N. Weil, *A Contribution to the Empirics of Economic Growth*, "The Quarterly Journal of Economics" 1992, vol. 107(2), May, pp. 407–437.

[3] P. Mauro, *The Persistence of Corruption and Slow Economic Growth*, IMF Working Paper no. 213, November, 2002.

more likely to end up in a bad equilibrium with low growth and widespread corruption when they have low productivity and a large public sector.

Ehrlich and Lui[4] build a model of endogenous growth with multiple equilibriums in which agents may invest in human capital or political rent seeking capital. While Mauro emphasizes private capital accumulation, the authors focus on the accumulation of human capital. In their model, a public office offers the prospects of economic rents that create incentives for individuals to compete for the privilege of becoming bureaucrats and engaging in corruption. These incentives lead to a diversion of resources away from growth-promoting activities (investments in human capital) towards power-seeking activities (investments in political capital).

Barreto's[5] work incorporates corruption into a neoclassical growth model in which government agents extract rents by acting as monopoly suppliers of a public good. The corrupt agents are constrained from extracting all rents by the possibility of being caught and punished. Sarte[6] proposes a framework in which rent-seeking bureaucrats restrict the entry of firms into the formal sector of the economy, which has a better system of property rights and law enforcement than the informal sector. When the costs of informality are high, growth is reduced relative to the free-entry case.

Ellis and Fender[7] contribution differs from the previous works quite substantially. In their model, competition between optimizing governments is motivated by the desire to capture the corruption rents generated from a lack of fiscal transparency, but competition does not eliminate these rents. The corruption however is lower during the transition than in the steady state. This observation is ca be questioned[8].

Newer models[9] incorporate corruption into a framework of growth models with the intention to simulate the set of stylized facts on the distribution of corruption across

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4 I. Ehrlich, F. Lui, *Bureaucratic Corruption and Endogeneous Growth*, "Journal of Political Economy" 1999, vol. 107, no. 6, part 2, December, pp. S270–S293.

5 R. Barreto, *Endogenous Corruption in a Neoclassical Growth Model – Developing Neo-Classical Implications*, "European Economic Review" 2000, vol. 44, no. 1, pp. 35–60.

6 P.-D. Sarte, *Informality and Rent-Seeking Bureaucracies in a Model of Long-Run Growth*, "Journal of Monetary Economics" 2000, vol. 46, pp. 173–197.

7 C.J. Ellis, J. Fender, *Corruption and transparency in a growth model*, University of Oregon Economics, Working Paper no. 2003–13.

8 Ł. Goczek, *Badanie empiryczne przyczyn korupcji w krajach transformacji*, "Gospodarka Narodowa" 2010, nr 4.

9 K. Blackburn, G. Forgues-Puccio, *Financial Liberalisation, Bureaucratic Corruption and Economic Growth*, Proceedings of the German Development Economics Conference, Research Committee Development Economics, Berlin 2006; K. Blackburn, N. Bose, M.E. Haque, *Endogenous corruption in economic development*, "Journal of Economic Studies" 2010, vol. 37, no. 1, pp. 4–25; K. Blackburn, N. Bose, S. Capasso, *Tax evasion, the underground economy and financial development*, "Journal of Economic Behaviour and Organisation" 2012, vol. 83, no. 2, pp. 243–253; M. Haque, R. Kneller, *Corruption clubs: endogenous thresholds in corruption and development*, "Economics of Governance" 2009,

countries. The models focus on bureaucratic corruption, but specify different forms of bureaucratic corruption. Either model corruption in tax evasion or corruption in public procurement processes. The production functions are to some extent different, but in all models, an output from the public sector serves as an input in the production function. The higher level of corruption the lower is this input. Compared to the rather arbitrary corruption equilibriums in most multiple equilibrium models, in these models the size of the capital stock per worker determines the corruption rate. If the capital stock is sufficiently low, all corruptible bureaucrats will choose the corrupt action in a low output, high corruption economy on a low steady state growth path. Conversely, if the capital stock is sufficiently high, no corruptible official will choose to become corrupt and we will observe high output, high growth rate economies with no corruption.

Most of the empirical evidence suggests that corruption lowers investment and hinders growth to a substantial extent, starting with the seminal article by Mauro[10]. Mauro's early result is supported by similar investigations that use other indices of corruption, various methods of estimation, and differing samples of countries. Various studies confirm his findings[11] – all of them find a statistically significant negative impact of corruption on economic growth in at least some of the estimated regressions. This finding, however, is not always confirmed[12].

The impact of corruption on the long-run growth or the level of GDP per capita has been frequently investigated. Not surprisingly, most of these papers find a negative impact of corruption on the level of economic development[13]. The results of these cross-section approaches have, however, been challenged. According to Islam[14], the

vol. 10(4), November, pp. 345–373; M. Haque, B. Hussein, *Where does Education go? – The Role of Corruption*, Manchester Growth and Business Cycle Center Working Paper, 2013.

[10] P. Mauro, *Corruption and Growth*, "Quarterly Journal of Economics" 1995, vol. 60(3), pp. 681–712.

[11] Among others: P. Mauro, *Why Worry About Corruption?*, International Monetary Fund, Working Paper, Washington 1997; H. Li, L.C. Xu, H.-F. Zou, *Corruption, Income Distribution, and Growth*, "Economics and Politics" 2000, vol. 12(2), pp. 155–182; P. Mo, *Corruption and Economic Growth*, "Journal of Comparative Economics" 2001, vol. 29(1), pp. 66–79; G. Abed, H.R. Davoodi, *Corruption, Structural Reforms, and Economic Performance in the Transition Economies*, in: *Governance, Corruption, & Economic Performance*, eds G. Abed, S. Gupta, IMF, Washington 2002, pp. 489–537; C. Leite, J. Weidemann, *Does Mother Nature Corrupt? Natural Resources, Corruption, and Economic Growth*, IMF Working Paper no. 99/85.

[12] As in J. Svensson, *Eight Questions about Corruption*, "Journal of Economic Perspectives. American Economic Association" 2005, vol. 19(3), Summer, pp. 19–42.

[13] D. Kaufmann, A. Kraay, *Growth without Governance*, "Economia" 2002, Fall; Z. Neeman, D. Paserman, A. Simhon, *Corruption and Openness*, CEPR Discussion Papers, 2004; Welsch H., *Corruption, Growth, and the Environment: a Cross-Country Analysis*, "Environment and Development Economics" 2004, vol. 9(5), pp. 663–693.

[14] N. Islam, *Economic Growth and Corruption Evidence from Panel Data*, "Bangladesh Journal of Political Economy" 2004, vol. 21(2), pp. 185–198.

unobserved fixed country effects and high multicollinearity between explanatory variables are likely to bias the estimation of the impact of corruption on per capita GDP. Whereas he finds a significantly negative relationship between corruption and GDP per capita in a cross-section model, estimating the same model in first differences – by this eliminating the unobserved fixed effects and reducing the correlation between exogenous variables – the impact of corruption is no longer significant. However, author's results suffer from very limited country coverage and the inclusion of only two explanatory variables – corruption and total investment. In addition, panel type bias and endogeneity problems are likely in the growth context, invalidating some of his results. These econometric issues are not tackled by the current growth and corruption literature.

Most surveyed literature on corruption employs a simple OLS cross-country estimation methodology, with very few exceptions, which employ a 2-stage least squares procedure without controlling for country specific effects. This choice of estimation techniques imposes significant biases on the estimation results. The central methodological issues are related, and very hard to solve. Most importantly, there is no widely accepted theory on which to base an empirical model. What theory there is relates to the micro-level – an exchange is imagined between an individual citizen and an official – and the terms of this exchange are traced by sometimes tortuous logic to characteristics of countries on which data are available. As a result, some variables are included in regressions with only quite insubstantial notions of how they might cause cross-national variation in corruption. At the same time, some plausible determinants are highly correlated among themselves, rendering it difficult to disentangle their separate effects. To make things worse, many of the supposed causes of corruption may also be caused by it or by some third factor, that causes both corruption and its potential cause. Problems of endogeneity are severe, and there are almost no valid instruments that can be assumed to influence corruption by only one pathway. Especially the literature on growth can be subject to sever criticism in terms of inadequate methodology[15]. An alternative and arguably superior approach, that addresses the potential endogeneity of the regressors, country specific effects, corruption measurement error, and also incorporates fixed effects is to use panel GMM regressions.

[15] The only studies that employ 2SLS are Mauro's original contribution, Fan, Simon, Treisman, and Pellegrini and Gerlagh. However, none of the authors reports the validity of their instruments. Hence, their 2SLS regressions may use "weak" instruments, which produce bias and inefficiency that are even more serious than standard OLS regressions.

3. Theoretical Framework

In our paper we use the corruption-augmented neoclassical growth Mankiw-Romer--Weil (MRW) model. The model assumes that technological progress originates outside the model. This is in line with the general perception that post-communist countries are using production technologies invented abroad rather than developing them on their own (i.e. they are technological followers and not technological leaders).

Below we briefly review the standard MRW growth model and its modification that takes into account the level of corruption. The original model takes the rates of savings, population growth, and technological progress as exogenous. There are three inputs, physical capital, human capital and labor, which are paid their marginal products. For simplicity, a standard Cobb-Douglas production function is assumed, so production at time *t* is given by:

$$Y(t) = AK(t)^{\alpha} H(t)^{\eta} L(t)^{1-\alpha-\eta} \tag{1}$$

where: Y is aggregate output, K is the stock of physical capital, H is the stock of human capital, L is the stock of labor, and *A* is the level of technology. According to Mankiw, Romer and Weil[16] the A term reflects not just technology but resource endowments, climate, institutions, etc., that may differ across countries. However, they do not try to endogenize it in their study. In contrast to the original MRW model we assume that the level of technology A is negatively related to the level of corruption C.

$$A = A(0)C(t)^{-\beta} \tag{2}$$

The stock of labor L is assumed to grow exogenously at rate n, hence the number of workers in time t can be related to the initial stock of labor in the following way:

$$L(t) = L(0)e^{nt} \tag{3}$$

The MRW model assumes that a constant fractions of output, s_K and s_H, are invested in physical and human capital. Defining k as the stock of physical capital per unit of labor, $k = K/L$, h as the stock of human capital per unit of labor, $h = H/L$ and y as the level of output per unit of labor, $y = Y/L$, the evolution of the economy is determined by

[16] N.G. Mankiw, D. Romer, D.N. Weil, op.cit.

$$k(t) = s_K y(t) - (\delta + n)k(t) = 0 \tag{4}$$

$$h(t) = s_H y(t) - (\delta + n)h(t) = 0 \tag{5}$$

where $y(t) = \frac{Y(t)}{L(t)} = Ak^{\alpha}h^{\eta}$, and δ is the rate of depreciation which for simplicity is assumed to be the same for both types of capital.

Equations (4) and (5) imply that the economy converges to a steady-state defined by:

$$k^* = \left[\frac{As_H^{\eta} s_K^{1-\eta}}{\delta + n} \right]^{\frac{1}{1-\alpha-\eta}} \tag{6}$$

$$h^* = \left[\frac{As_H^{1-\alpha} s_K^{\alpha}}{\delta + n} \right]^{\frac{1}{1-\alpha-\eta}} \tag{7}$$

The central predictions of the MRW model concern the impact of saving rates, and population growth on the level of real per capita income in the steady-state. Substituting (6) and (7) into the production function gives an equation for income per capita:

$$y^* = Ak^{*\alpha}h^{*\eta} = A^{\frac{1}{1-\alpha-\eta}} \left(\frac{s_H}{\delta + n} \right)^{\frac{\eta}{1-\alpha-\eta}} \left(\frac{s_K}{\delta + n} \right)^{\frac{\alpha}{1-\alpha-\eta}} \tag{8}$$

Equation (8) shows how real income per capita in the steady-state depends on population growth and accumulation of physical and human capital. In addition, the A term captures the impact of corruption. We focus on the MRW model's implications for panel data. Therefore, assuming that the economy is in the steady-state, we can transform equation (8) into our estimating equation by taking logs of both sides and adding country and time subscripts:

$$\ln y_{it} = \beta_0 + \beta_1 \ln C + \beta_2 \ln s_H + \beta_3 \ln s_K + \beta_4 \ln(\delta + n) + u_i + v_t + \varepsilon_{it} \tag{9}$$

where βs are the parameters to be estimated, u denotes a country-specific effect, v denotes a time-specific effect and ε denotes the stochastic disturbance term; for $i = 1,...,N$ countries and $t = 2,...,T$ years.

Our first goal is to examine the empirical relationship between the level of corruption and the level of per capita income, having controlled for other determinants of the steady-state. Our second goal is to generalize our results. To implement the corruption augmented MRW model, we have been assuming so far that countries are in their steady

states (or, alternatively, that the deviations from steady-state were random). However, this assumption can be questioned. Therefore, we examine the predictions of the corruption augmented MRW model for behavior out of the steady state.

The MRW predicts that countries reach different steady-states depending on the underlying parameters of the model. In particular, it can argued that much of the cross-country differences in income per capita can be traced to differing determinants of the steady-state in the MRW growth model that include accumulation of human and physical capital, the population growth rate as well as the level of corruption. Thus, the MRW model does not predict absolute income per capita convergence; it predicts only that income per capita in a given country converges to that country's steady-state value. In other words, the MRW model predicts convergence only after controlling for the determinants of the steady-state, a phenomenon that is called conditional convergence[17].

Approximating around the steady state, the rate of growth is given by:

$$[\ln y_T - \ln y_0]/T = -(1 - \exp - \lambda T)/T \ln y_0 + (1 - \exp - \lambda T)/T \ln y^* \qquad (10)$$

where y_T is the level of per capita income in the final year of the period, y0 is is the level of per capita income in the initial year of the period, and y^* is the steady-state level of income per capita given by equation (8). Substituting (8) into (10) we obtain our estimating equation for the rate of economic growth:

$$\ln y_{it} - \ln y_{it-1} = \gamma_0 + \gamma_1 \ln y_{it-1} + \gamma_2 \ln C + + \gamma_3 \ln s_H + \gamma_4 \ln s_K + \gamma_5 \ln(\delta + n) + u_i + v_t + \varepsilon_{it} \qquad (11)$$

with notation as above.

The econometric worries about the data-generating process, which guides the variables in the two parts of and its potential regressors, can be summarized in the following list:

- The process is dynamic, with current realizations of the dependent variable influenced by past ones (both corruption and GDP levels are close to random walk).
- There may be arbitrarily distributed fixed individual effects.
- Significant endogeneity problems (by definition many variables are joint for the two models) and good instruments may not be available outside the immediate dataset.
- The idiosyncratic disturbances (those apart from the fixed effects) may have individual-specific patterns of heteroskedasticity and serial correlation.

[17] In addition, the MRW model makes quantitative predictions about the speed of convergence to steady state. However, these predictions are beyond the scope of the current paper. Instead, in this paper we rather focus our attention on the relationship between the level of corruption and the rate of economic growth along the transition to the steady-state.

- The number of time periods of available data, *T*, may be small and a fixed effects estimator in such panels is inconsistent, because there is a correlation of the group mean of the error term with the lagged dependent variable.

One way to address these problems has been through Generalized Method of Moments estimators applied to dynamic panel data models. Because of the good performance of the System GMM estimator in terms of finite sample bias and RMSE, it has become the estimator of choice in many applied panel data setting[18]. Hence, in both parts of the project the Fixed Effects estimator and the two-step System GMM estimator with small sample correction is applied. In both cases the instruments will be the endogenous GMM instruments, that is lagged levels of all endogenous variables for the level equation and differences in the levels and second lags of levels for the first difference equation. When allowing for pre-determined variables, the reverse causality from past values of GDP to is fully controlled for and the regression coefficient measures only the marginal effect from contemporary values of to future values of GDP per capita. Hence, a regression coefficient of a pre-determined endogenous variable measures causality in the Granger sense of the capital stock of each country.

4. Data Sources

Definitions of variables used in our empirical study along with the data sources are summarized in Table 1.

Table 1. Variables definitions and data sources

Variables	Abbreviation	Descritpion and source
Dependent variable: Control of corruption	Corr	Control of Corruption Index (World Bank – WGI, 2015);
Explanatory Variables	Gddp	First difference of lagged logarithm GDP per capita divided by the number of years (World Bank – WDI, 2015);
	Lgdp	Logarithm of GDP per capita (World Bank – WDI, 2015);
	L.lgdp	Lagged logarithm of GDP per capita (World Bank – WDI, 2015);

[18] Ł. Goczek, *Przegląd i ocena ekonometrycznych metod używanych w modelach empirycznych wzrostu gospodarczego*, "Gospodarka Narodowa" 2012, nr 10; M. Próchniak, B. Witkowski, *Real economic convergence and the impact of monetary policy on economic growth of the EU countries: The analysis of time stability and the identification of major turning points based on the Bayesian methods*, National Bank of Poland Working Paper no. 137, 2012.

Variables	Abbreviation	Descritpion and source
Explanatory Variables	Save	Gross Capital Formation as a fraction of GDP per capita (World Bank – WDI, 2015);
	Sschool	Secondary School Enrollment (World Bank – WDI, 2015);
	Popgrw	First difference of logarithms of population plus the rate of depreciation (World Bank – WDI, 2015).

Source: own.

5. Estimation results

In this section we report two sets of estimation results. All of the presented specifications passed relevant diagnostic test justifying their usage (e.g. Arellano-Bond second order and Sargan overidentification tests). In Table 2 we report estimation results obtained for the relationship between the level of corruption and the level of per capita income, having controlled for other determinants of the steady-state.

Table 2. Estimation results for the steady-state level of income

	(1)	(2)	(3)	(4)
	OLS	OLSTD	FE	FETD
save	0.00434	0.00244	0.00372*	0.000775
	(1.14)	(0.62)	(2.27)	(0.76)
popgrw	–15.33***	–18.79***	10.07***	4.548***
	(–5.23)	(–6.40)	(5.26)	(4.02)
corr	0.623***	0.633***	0.164***	0.0645*
	(12.96)	(13.45)	(3.41)	(2.27)
school	0.0314***	0.0230***	0.0306***	0.00846***
	(9.28)	(6.28)	(16.26)	(6.05)
_cons	6.402***	7.499***	6.336***	8.115***
	(19.90)	(19.78)	(36.92)	(67.29)
N	361	361	361	361

t statistics in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$
Source: own

In column (1) of Table 1 we report the benchmark estimation results obtained using the standard OLS method without controlling for time effects. It turns out that the estimated parameter on the measure of corruption is statistically significant already at the

1 per cent level and displays an expected sign. This means that corruption is negatively related to the level of per capita income. The estimated parameters on the control variables are also statistically significant already at the 1 per cent level and display the expected signs with the exception of the saving rate which is not statistically significant at all.

In column (2) we control for time effects for individual years of our sample. The obtained estimates are very similar to those reported in column (2) and confirm our previous conclusion that the level of corruption is negatively related to the level of per capita income.

In column (3) we change the estimation method and use the fixed effects that allow us controlling for the unobserved individual country characteristics without controlling for the time effects. Controlling for the country fixed effects does not change our previous conclusion concerning the negative relationship between the level of income and the level of corruption as the estimated parameter on our measure of corruption remains statistically significant at the 1 per cent level. However, the magnitude of the estimated parameter on this measure declines significantly.

Finally, in column (4) we report estimation results obtained from the specification in which we control for both individual country and time effects. In this case the estimated parameter on the measure of corruption is statistically significant only at the 10 per cent level and displays the expected sign.

In Table 3 we report estimation results obtained for the level of corruption and the rate of growth of pre capita income, having controlled for other determinants of the steady-state.

In column (1) we report the benchmark estimation results for the annual rate of growth obtained using the fixed effects estimation method. It turns out, however, that the estimated parameter on the measure of corruption is not statistically significant. The other two parameters of the steady-state: the saving rate and the schooling rate display the expected signs and are statistically significant, although at different levels of statistical significance: 1 and 5 per cent, respectively, while the rate of population growth is not statistically significant. Finally, the estimated parameter on the initial level of per capita income is statistically significant already at the 1 per cent level and displays an expected negative sign. The confirms the existence of the strong conditional convergence effect among the post-communist countries.

In column (2) we display the estimation results for the annual rate of growth obtained using system GMM. Our previous conclusions concerning the relationship between the rate of growth of income per capita and the measure of corruption are unchanged as this variable remains statistically not significant.

In column (3) we report the estimation results for the rate of growth of per capita income obtained using system GMM and controlling for time effects for individual

years. However, the estimated parameter on the level of corruption is still not statistically significant.

Finally, in column (4) we report the estimation results for the 3-year average rate of growth of per capita income obtained using system GMM. Again, we report the lack of statistical significance on the level of corruption. Therefore, we can conclude that our measure of corruption is not related to per capita income growth in the post-communist countries.

Table 3. Estimation results for the rate of growth of income per capita

	(1)	(2)	(3)	(4)
	FE	SYSGMM	SYSGMM_TD	SYSGMM3y
L.lgdp	–0.0762***	–0.0683***	–0.0617***	–0.0645***
	(–5.41)	(–5.86)	(–4.56)	(–6.23)
Save	0.00252***	0.00380***	0.00185***	0.00120*
	(5.75)	(8.05)	(4.53)	(2.76)
popgrw	–0.376	–4.212***	–0.769	–0.234
	(–0.70)	(–6.52)	(–1.34)	(–0.44)
corr	0.00511	0.00481	0.0164	0.00796
	(0.39)	(0.26)	(1.04)	(0.72)
School	0.00200**	0.000880	0.00253**	–0.000503
	(3.00)	(1.01)	(3.09)	(–0.89)
_cons	0.495***	0.487***	0.483***	0.610***
	(4.94)	(5.63)	(3.53)	(6.12)
N	361	358	358	153

t statistics in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$
Source: own

6. Conclusions

In this paper we used the corruption augmented Mankiw-Romer-Weil theoretical framework to study the empirical relationship between corruption perception, the level of per capita income and the rate of growth in post-communist countries. Our empirical study was based on the country-level panel data for 27 post-communist countries during the period 1994–2013. Our estimation results showed that corruption perception was negatively related both to the level of per capita income and the rate of economic

growth. However, only the relationship between corruption perception and the level of per capita income turned out to be statistically significant

The empirical investigation has offered a quantitative assessment of the robust negative effects of corruption in post-communist countries. Using indicators of corruption from the World Bank, the lack of corruption has been found to have a positive and statistically significant impact on the logarithm of real per capita GDP, confirming the first hypothesis of the article. Therefore it is argued, that corruption has significant economic costs. In particular, such corruption exerts an inordinately high price on the countries – bribes, unlike taxes, involve distortion in the discretionary and uncertain use of the government power. This results in additional costs to businesses and alongside with resources allocated to unproductive activities, and the distortion of policies aimed at economic development pose a significant problem. However, on the positive side, widespread corruption does not seems to be one of the main reasons preventing poor countries from catching up as in the growth rate investigation control of corruption index was not significant.

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Postrzeganie korupcji, poziom dochodu i wzrostu w krajach postkomunistycznych – wyniki badań panelowych

Streszczenie

W niniejszej pracy korzystamy z ram teoretycznych modelu wzrostu Mankiwa–Romera–Weila rozszerzonych o korupcję do zbadania empirycznej zależności między percepcją korupcji, poziomem dochodu na głowę a stopą wzrostu gospodarczego w krajach postkomunistycznych. Nasze badanie empiryczne jest oparte na danych panelowych na poziomie krajów dla 27 krajów postkomunistycznych w okresie 1994–2013. Uzyskane przez nas wyniki empiryczne pokazują, że percepcja korupcji jest negatywnie związana zarówno z poziomem dochodu na głowę, jak i ze stopą wzrostu gospodarczego. Jednak tylko zależność między percepcją korupcji a poziomem dochodu na głowę jest statystycznie istotna.

Słowa kluczowe: wzrost gospodarczy, transformacja, korupcja, dane panelowe

JEL: O40, O50

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