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Political stability as a factor affecting growth in agricultural sub-Saharan African countries

Introduction

Most of the world's least developed countries (LDCs) are agricultural countries. The importance of agriculture and food production results from the most fundamental human needs, meeting of which is essential for survival. The majority of the population in Africa (about 65%) is employed in agriculture, but the productivity of this sector is low. A relatively large proportion of the population lives in extreme poverty and at risk of malnutrition. A number of factors, such as the decline in food production due to defective agricultural policies, political and institutional instability, chronic droughts, epidemics, deterioration of the environment, declining infrastructure and insufficient

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investment in agricultural research in sub-Saharan African (SSA) countries negatively affect agricultural performance (Paarlberg, 2005; Karembu et al., 2009). This issue is particularly noteworthy since long-term demographic projections clearly show that the future of SSA countries and their capacity to meet the needs of a young and rapidly growing population have a potential for both regional and global impact.

The study work presented in this paper is conceptually grounded in institutional economics. Therefore, the assumption of a lack of influence of institutions on the economy is rejected. Due to the typical quantitative character of this study, the panel model estimation methods, the nonparametric Spearman's rank order correlation test and quantile regression were all used for the empirical analysis. Three hypotheses were tested in this paper: first, that political stability has a statistically significant impact on GDP per capita in SSA countries; second, that political stability is significantly and positively correlated with selected factors, which are presumed to be beneficial for agricultural activity in SSA countries; and third, that the impact of political stability on GDP per capita decreases after a particular level of income is reached.

The paper is divided into four parts. The first part provides a literature review, focusing in particular on the potential impact of the political situation on agricultural activity. The second part is a justification of the method selection, and a specification of the sample and statistical data used. The third part of the paper is devoted to an evaluation of the research results. The fourth part draws conclusions and implications from the results. The most notable results of the study include the demonstration of the significant influence of political stabilization on economic growth in SSA countries and the effect of increasing safety in a country on agricultural activity, e.g. by reducing the share of food imports and increasing agricultural production

Literature review

This paper focuses primarily on the issues of the rule of law and political stability. It was Smith (2007) who believed that good governance and political stability was a prerequisite for long-term development. However, the debate on how political stability should be achieved is ongoing in the subject literature (Waguespack et al., 2005). According to the Regime Type Theory, political stability is directly linked to democracy. In autocratic systems decisions are often taken in an impulsive manner and in line with the interests of the autocrats, which may differ from those of the general public. In turn, in the light of the Veto Players Theory, it is irrelevant whether democracy or autocracy is concerned, as achieving political stability depends on the existence of a sufficient number of independent institutions.

Researchers have no doubt that the institution of the state is still the basic unit of social and political life (Łoś-Nowak, 2009, p. 17), although, as Hobsbawm (1999) noted, people in SSA countries, thanks to fertile land and low population density,

were able to function without the existence of state structures. The latter condition has lost its relevance largely due to the current birth rate in SSA countries. Moreover, there is a feedback effect between population growth and socio-political instability in agricultural countries (Turchin, 2005). One theory explaining the collapse in agricultural countries is the demographic-structural theory (Goldstone, 1991). Amartya Sen (2000) reached even more far-reaching conclusions and claimed that famine in developing countries is not due to food shortages, but to the incompetence of those in power. Therefore, the policies pursued by the state and their effectiveness have an impact on particular areas of the economy, including agriculture. In low-income countries, this impact is "critical", given the low level of economic development and the significant number of people living below the poverty line.

Historical research shows that the institution of the state could have contributed to increasing productivity in agriculture because it offered protection and a sense of security. The absence of an efficient state resulted in limiting the cultivated area to areas that could be protected by the inhabitants themselves (Earle, 1997; Wickham, 1989). However, the existence of a state is not a sufficient condition for increasing productivity. In order for this to happen, the state must serve its purpose properly. This is only possible when it has the capacity to generate national income (Ottaway, 2006), the division of which is sufficient to ensure the existence of a society – in the case of SSA countries, this is not obvious. This leads to a further feedback effect, where the instability impedes the income generation the state needs to fulfil its functions. Better quality of governance allows for enlargement of the area where, in a broad sense, security is "provided" by the institution of the state. In this sense, the quality of governance can be linked to political stability, freedom from acts of violence that destabilise the situation and the economic and agricultural activities.

However, the term "political stability" is not unambiguous (Trzciński, 2015). One can focus on various aspects of stability: lack of violence and presence of public order (McCulloch, 2013); lack of political violence or low risk of such violence (Lijphart, 1977); maintaining the social behaviour of individuals within the limits dictated by their political roles (Ake, 1975); political predictability attracting investment to a given country (Shepherd, 2010); or the stability of executive power (Alesina et al., 1996). In the vast majority of cases, political stability facilitates growth, including an increase in agricultural production. However, it cannot ensure economic efficiency all the time, as many reforms accelerating economic efficiency were carried out at a time of political crises (Binswanger, Deininger, 1997). In some cases, stability and good governance can even reduce efficiency. In countries with a weak, inefficient bureaucracy, it is corruption that may increase efficiency (Huntington, 2006).

The disruption of the state is gradable. Wars and armed conflicts are the most acute form of instability. Apart from the staggering numbers of deaths they cause, they have many significant direct consequences in terms of material and intangible assets (Rydzak, 2011). Wars and armed conflicts result in the destruction or loss

of homes, land, labour, tools, cattle, livestock and other productive assets (Brück, 2001; Bundervoet, Verwimp, 2005; Gonzalez, Lopez, 2007; Verpoorten, 2009). The weakening of the agricultural production potential is also accompanied by deteriorating health care and worse functioning of markets and institutions (Justino, 2012). As the risk of conflict increases, direct foreign investment decreases (Suliman, Mollick, 2009). War and armed conflicts result in a decrease in the quality of life and the occurrence of problems such as malnutrition. The mutual relationships between wars and armed conflicts on the one hand and food security on the other are also subject to investigation (Martin-Shields, Stojetz, 2019). In fact, the phenomena occurring in agriculture may influence conflicts, e.g. the intensity of conflicts in Iraq and Pakistan is lower during the harvest when the demand for workers is higher (Guardado, Pennings, 2016). The protracted nature of crises is a serious problem. Some countries are unable to recover from crises (protracted crisis), which are so prolonged that the state of affairs, which was expected to be temporary, becomes permanent (Collier, 2008).

In addition, economic globalisation precedes political globalisation (Stiglitz, 2007). This leads to problems caused by the fact that the level of development of political institutions is inadequate in relation to market institutions. Some researchers believe that it is the consistently applied principles of the free market that lead to hunger and poverty (Korten, 2002; Ziegler, 2013; Bello, 2011). Others are less radical, but remain critical of some aspects of the free market and globalisation (Chang, 2016; Rodrik, 2011). On the other hand, the dysfunctionality of the state extends to different contexts, including the economic one (Kłosowicz, 2017). The impact of the quality of governance on development and poverty has been studied at the level of individual countries, e.g. Botswana (Sebudubudu, 2010). Research into the influence of the quality of government on agricultural productivity has also been conducted. The primary factor limiting agricultural productivity is not a weakness in the area of natural resources or a lack of the technological potential to increase production using available resources, but rather the weakness of the institutions and policies (Hayami, Ruttan, 1971).

The conclusions of the productivity analysis are sometimes surprising. Variables such as the rule of law, corruption control and government effectiveness, examined separately, have a positive effect on agricultural productivity. When all the variables are included in the model: the rule of law significantly increases the efficiency of agriculture, but political stability and accountability lead to decreases in efficiency (Lio, Liu, 2008). There are several mechanisms having an influence on the quality of governance over agricultural productivity. The state creates and maintains the institutions responsible for the functioning of the market. The degree of property protection or the efficiency of the judiciary in terms of protecting contracts encourages or discourages investment and production (Lio, Liu, 2008). Osman *et al.* (2012), Przeworski *et al.* (2000) state that sudden or haphazard policy changes have a strong negative impact on economic decisions and thus harm

growth and productivity. Poor management affects productivity through, among other things, taxes on production (Méon, Weill, 2005) and corruption, which can be dangerous as it leads to the imposition of unpredictable taxes (Campos et al., 1999). Many countries with inadequate regulations and policies have imposed high indirect taxes on agriculture (Schiff et al., 1992). In developing countries, on the other hand, the existence of good quality regulatory systems has a positive impact on agricultural productivity, but this is not the case in developed countries (Bayyurt, Yilmaz, 2012).

Analyses concerning African countries are also conducted in the mainstream of institutional economics. For example, Omoteso and Ishola Mobolaji (2014) and Fosu (2013) claim that institutions influence productivity in African countries. Based on a study of 27 sub-Saharan countries, Osman *et al.* (2011) suggest that political stability has a positive and significant impact on economic performance. Due to the differences in the mechanisms of institutions – state and market – there is an evident need to examine the relationship between institutions and economic development opportunities for particular groups of countries in greater depth. This is particularly true of sub-Saharan countries, as they remain the poorest area of the world, especially agricultural countries where the quality of life is relatively poor.

Data and methods

Panel data for 39 SSA countries[4] in the period 1995–2017 were used in the research. Conclusions are drawn both for the whole group of SSA countries and for countries classified as African agricultural countries. What is important is that the division was made according to the median – i.e. the classification into agricultural and non-agricultural countries was based on the criterion of the median percentage of employment in agriculture (Cf. Table 1)[5]. Thus, the panel was divided into countries above the median (agricultural countries) and below the median (non-agricultural countries)[6] (cf. Table 1). The dependent variable adopted in the study was the level of

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[4] The following countries were analysed: Burkina Faso, Burundi, Central African Republic (CAR), Chad, Ivory Coast (Côte d'Ivoire), Ethiopia, Eswatini, Guinea, Guinea-Bissau, Mali, Niger, Nigeria, Sierra Leone, Sudan, Benin, Cameroon, Gambia, Ghana, Kenya, Madagascar, Malawi, Mozambique, Rwanda, Senegal, Togo, Tanzania, Uganda, Zambia, Botswana, Gabon, Lesotho, Namibia, the Republic of South Africa (RSA), Zimbabwe, Angola, Congo, Democratic Republic of the Congo, Liberia and Mauritania.

[5] For countries with a median varying between more than 61.3% and less than 61.3% in parts of the reference period, the median for the entire reference period was used. In particular, it was the case of Burkina Faso, Mauritania, Sierra Leone, Zambia and Zimbabwe.

[6] Compared to, for example, European countries, almost all African countries can be classified as agricultural countries, cf. Table 1.

GDP per capita PPP (in constant prices from 2011)[7], while the independent variable was political stability (cf. Przeworski et al., 2000; Fosu et al., 2006; Osman et al., 2011). This reflects the level of security and stability in a given country, and its value can be estimated on the basis of the annual empirical research data of the World Bank located in the World Governance Indicators database, which allows one to measure the level of the rule of law, corruption control, efficiency of authorities, quality of regulations, participation and accountability and political stability.

Table 1. Descriptive statistics of the variables for 39 sub-Saharan African countries in the period 1995–2017

Variable	Mean	Median	SD	Min	Max
GDPpc_PPP11	3130	1790	3520	373	20 900
PoStab	-0.652	-0.477	0.862	-2.99	1.18
Hc	1.69	1.61	0.403	1.05	2.89
GDPpc_gr	1.79	1.91	4.70	-36.8	37.0
AGR_VA_GDP	26.0	25.1	15.2	1.83	79.0
Agr_va_gr	3.46	3.52	8.67	-45.4	91.6
Emp_agr_sh	56.9	61.3	20.2	4.60	92.6
Arable_l	13.7	10.2	12.7	0.321	48.7
Arab_HpP	0.259	0.222	0.171	0.0902	1.48
Fertil	14.4	8.53	16.7	0.0004	89.6
Electr_acc	26.5	20.4	20.6	0.0100	91.4
Electr_acc_R	12.9	7.99	15.0	0.0100	89.9
Food_ex_sh	34.7	28.6	27.6	0.0157	99.1
Food_im_sh	17.8	16.2	8.37	0.474	62.4
Food_prodIN	105.	100.	27.3	44.3	207.

Variable names: GDPpc_PPP11 – GDP per capita PPP (const 2011); PoStab – political stability; hc – human capital; GDPpc_gr – growth of GDP per capita; AGR_VA_VA_GDP – share of agricultural value added in GDP; Agr_va_gr – share of agricultural value added in growth; Emp_agr_sh – share of agricultural employment in percent; Arable_l – share of cultivated land in percent; Arab_HpP – cultivated land in hectares per person; Fertil – fertilisers in kilograms per hectare of farmland; Electr_acc – access to electricity, in percent; Electr_acc_R – access to electricity in rural areas, in percent; Food_ex_sh – share of food export in export volume; Food_im_sh – share of food import in import volume; Food_prodIN – food production index (according to WDI, data 2004–2006 = 100).

Source: own study based on WDI (2019) and Penn World Tables (2019).

The variable "political stability and absence of violence/terrorism" has typical values ranging between approximately -2.5 and 2.5 (it may take lower or higher values). It determines the likelihood of destabilisation of the political situation in

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[7] In the study, relationships between the levels of variables and not their variations were analysed, cf. Voigt (2011).

a given country or of politically motivated violence, including acts of terrorism. It is a resultant of partial measures which characterise the level of security[8]. Moreover, a number of variables aimed at approximating human capital[9], the nature of agricultural activity or infrastructural development have been adopted in the research (cf. Table 1).

In order to verify the hypotheses adopted in the introduction, a panel model with fixed effects, quantile regression and non-parametric tests were used.

There are two basic models for the analysis of panel data: fixed effects and random effects models. The difference between the two models is primarily in the treatment of the individual effect α_i, which includes unobservable and constant over time factors affecting the level of the explained variable. In the model with fixed effects, this parameter is assumed to be systematic and can be estimated as a free term for each unit (e.g. country). In turn, in the model with random effects, it is treated as a random variable which has a normal distribution and is not directly subject to estimation. As Woodbridge (2002, pp. 251–252) points out, the difference between the two types of models lies primarily in the fact that in the former case the correlation between the individual effect and the vector of explanatory variables is allowed, while in the latter case it is assumed that there is no such correlation. It is hard to assume that this correlation does not exist in secondary data, so the use of fixed effect models seems to be justified. Furthermore, fixed effect models deal, by construction, with the one of the important sources of endogeneity, i.e. the omitted variable problem, as they cover the impact of all other variables that are not included in the model.

To check the robustness of the results, control variables were included in the model. An advantage of this approach is that factors affecting the dependent variable are taken into account in the models, which reduces the risk of finding a spurious statistical relationship between the explained variable and the explanatory variables. Based on the results of previous studies (and the availability of statistical data for the analysed group of countries), the following control variables were considered:
- development of the infrastructure approximated by the share of the population of the country with access to electricity and, alternatively, by access to electricity in rural areas (cf. O'Gorman, 2015; Kodongo, Ojah, 2016; Świerczyńska, 2019) (Electr_acc and Electr_acc_R variables);
- level of human capital per employee determined on the basis of the number of years of education and the expected rate of return on different levels of education (cf. Romer, 1993), based on Penn World Table data (hc variable);

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[8] The *World Governance Indicators* database (World Bank, 2019) provides data on the methodology for estimating the value of a variable, including those relating to partial measures. Political stability is the resultant of 21 variables obtained from 9 different sources (e.g. government stability, ethnic tensions, political demonstrations). The variable is estimated based on results from the survey.

[9] Human capital index is taken from the Penn World Table database. It is based on years of schooling and returns to education (cf. PWT, 2020).

• development of financial markets expressed as a share of private loans by banks in GDP (Beck et al., 2001; Adeniyi et al., 2015), based on data from the World Bank (CrePriGDP variable).

The general form of the panel model with fixed effects is as follows:

$$y_{it} = \beta_0 + X_{it}\beta' + \alpha_i + \varepsilon_{it} \tag{1}$$

where X is the vector of independent variables, α_i is the individual effect, and is ε_i is a pure random error. The final model takes the following form:

$$PKBpc_{it} = \beta_0 + \beta_1 PKBpc_{i,t-1} + \beta_2 PoStab_{it} + \rho X_{it} + a_i + \varepsilon_{it} \tag{2}$$

where $PKBpc_{it}$ is the level of GDP per capita in a given period in a given country; *PoStab* is political stability and X_{it} is a vector of control variables. As heteroscedasticity and autocorrelation may be issues in the calculations, all models were estimated using Beck-Katz standard errors.

In the second stage of the study, the correlation of the political stability and the variables concerning agricultural production in agricultural and non-agricultural SSA countries was compared using non-parametric tests. The idea was to select a group of factors which would match 2 criteria: presumed beneficial effect for agriculture and access to data[10]; and then to divide the sample into two subgroups: agricultural and non-agricultural countries based on the median value for the whole sample. Despite the efforts, the number of observations in the subgroups was so small that we excluded the possibility of using an econometric model and decided to apply non-parametric tests. Due to the missing data and data credibility issues, the conclusions drawn from the quantitative studies were formulated with caution.

The impact of political stability on the level of GDP per capita may also vary at different levels of economic wealth within a country. In the third stage, quantile regression analysis of individual deciles of the distribution of GDP per capita was conducted, both for agricultural and non-agricultural countries. Due to the fact that the data have a panel structure, an innovative model of quantile panel regression with fixed effects was used (Machado, Silva, 2019). Therefore, the model of quantile regression was estimated using the method of moments.

RESULTS

In order to gain a better understanding of the economic mechanisms in SSA, studies were carried out in which the explained variable is GDP per capita. The results of the estimation for the political stability impact variable (Model 1) and

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[10] Data for SSA countries is very limited, where the missing data decreases the number of observations for quantitative studies

models including control variables (Models 2–6) are presented in Table 2. Models 2 and 3 include the infrastructure variable, in the first case with respect to the country average and in the second case for the rural areas. Due to the loss of observation in Model 3 (numerous data gaps for the variable), only the total access to electricity variable was considered in the following steps. The specification of model 4 included a variable approximating the level of human capital, while a variable concerning the level of development of financial markets was included in model 5. Adding further control variables would result in the loss of too much information and hence reduced reliability of the result. Therefore, only 4 control variables were included. In the last presented specification, an additional variable was added, which characterises the share of a country's arable land[11]. Regardless of the stage of the study, this variable has a statistically significant negative impact on GDP per capita.

On the basis of the empirical analysis it was found that a higher level of political stability was a significant determinant of GDP per capita in the SSA countries in the period in question. The inclusion of control variables also allowed the confirmation of the positive impact of infrastructure, financial development and human capital on the explained variable. This allows us to confirm the conclusions of earlier studies (Świerczyńska, Kryszak, 2019). At the same time, it turns out that the focus of the economy on agriculture is a factor which negatively affects the explained variable. The limitations of the empirical stage include the lack of data which reduced the number of observations when subsequent control variables were added.

The next stage of the research involved an analysis and comparison of the relationships between selected variables with the level of political stability in agricultural and non-agricultural SSA countries in the 1995–2017 period. The use of non-parametric Spearman's rank correlation tests allowed us to state the following patterns. Firstly, in both groups, both the percentage share of people employed in agriculture and the share of added value of agriculture in GDP correlate negatively with political stability, although the strength of these relationships is greater in non-agricultural countries. This may mean that in more industrialised countries, the stabilization of the political situation is an important factor in the movement of labour force from agriculture to other sectors of the economy. In both groups of countries, it was found that both electrification across the whole population and in rural areas positively correlates with the variable of political stability, which is a conclusion consistent with the estimation of the previously discussed panel models (cf. Table 3).

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[11] According to WDI data, arable land includes land defined by the FAO as land under temporary crops (double-cropped areas are counted once), temporary meadows for mowing or for pasture, land under market or kitchen gardens, and land temporarily fallow. Land abandoned as a result of shifting cultivation is excluded.

Table 2. Fixed effects panel model estimation of GDP per capita (const. PPP 2011) using observations for 1995–2017 (with PCSE[b])

Variables[a]	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Const	3322.47*** [79.454]	1987.16*** [70.768]	3060.61*** [72.060]	1215.45*** [358.361]	1161.47** [463.965]	1324.55*** [444.160]
PoStab	179.910*** [40.333]	178.092*** [28.274]	265.708*** [50.047]	191.742*** [28.735]	199.556*** [26.951]	245.764*** [29.148]
Electr_acc		46.334*** [2.624]		41.269*** [2.152]	37.339*** [3.178]	37.830*** [2.943]
Electr_acc_R			37.196*** [4.782]			
hc				584.533** [215.813]	555.277* [291.339]	738.955** [305.580]
CrePriGDP					17.436** [7.399]	19.374** [7.343]
Arable_1						−33.813*** [6.250]
Joint test on named regressors	19.897***	157.508***	30.9675***	145.674***	112.762***	116.033***
Robust test for differing group intercepts	202.491***	146.351***	102.79***	147***	154.306***	196.711***
Within R^2	0.014	0.318	0.190	0.329	0.324	0.336
LSDV R^2	0.968	0.979	0.975	0.979	0.980	0.981
Hausman test (p-value)	0.042	0.001	0.001	0.001	0.001	0.001
N	741	702	611	648	551	535

[a] No collinearity problem was detected

[b] PCSE – Panel Corrected Standard Errors.

Notes: *, **, *** indicate statistical significance: $*\ p < 0.1$; $**\ p < 0.05$; $***\ p < 0.01$.

Source: own study based on WDI and data (2019) and Penn World Tables (2019).

Table 3. Results of estimation of the Spearman's rank correlation of the political stability variable with selected variables concerning agricultural production in agricultural and non-agricultural SSA countries in the years 1995–2017

Variables*	Agricultural countries		Non-agricultural countries	
	rho	p-value	rho	p-value
Emp_agr_sh	-0.1765	0.0004	-0.4428	0.0000
AGR_VA_GDP	-0.3104	–	-0.4138	0.0000
Food_im_sh	-0.1496	0.0094	nc	nc
Food_ex_sh	-0.1435	0.0126	nc	nc
Fertil	0.3999	0.0000	nc	nc
Electr_acc	0.1654	0.0012	0.2100	0.0001
Electr_acc_R	0.1660	0.0033	0.1064	0.0656
Arab_HpP	nc	nc	0.3369	0.0000
Arable_l	nc	nc	-0.164	0.0039

Notes: explanations as in Table 1; nc – no statistically significant correlation.

Source: own study based on WDI data (2019).

Significant differences were found with regard to the variables related to the contribution to and the result of agricultural production. Firstly, in agricultural countries, the improvement in political stability is linked to an increase in fertiliser use, which may imply an improvement in productivity. Secondly, in agricultural countries, a higher level of political stability is associated with a decrease in the share of imports of agricultural products based on raw materials in total imports (greater self-sufficiency, agricultural production satisfies the needs of the domestic market), and, thirdly, it also correlates with a decrease in the share of exports of agricultural products based on raw materials (which means an increase in the share of exports of other categories of goods, potentially more technologically advanced, e.g. processed agricultural products) (cf. Table 3). On the basis of the obtained research results, it should be stated that stabilisation of the political situation may contribute to undertaking activities that are more productive from the point of view of the agricultural SSA countries.

In the last part of investigation, the quantile panel regression was used to determine whether the impact of political stability on GDP differs for different quantiles of GDP distribution (cf. Table 4).

The results of quantile regression indicate that political stability had a stronger impact on the level of GDP per capita in non-agricultural countries, but the same trend was observed in both groups of countries, i.e. in those with increases in income, measured as GDP per capita, the impact of political stability became weaker. At relatively high levels of GDP, the role of political stability ceased to be statistically significant. This means that once a certain level of national income is reached, its further growth is more dependent on other factors. Given that

agricultural countries are the poorest of the SSA countries, it can be assumed that, for them in particular, action to maintain political stability is crucial to promote economic growth.

Table 4. Results of quantile regression concerning the influence of political stability on GDP per capita level in agricultural and non-agricultural countries of sub-Saharan Africa in the years 1995–2017

Function / decile	Agricultural (N=399)		Non-agricultural (N=342)	
	Parameter	constant	Parameter	constant
Location	76.454	1539.60***	346.36	5385.12***
	(74.696)	(59.93)	(294.75)	(140.76)
Scale	-55.2**	152.40***	-83.66	530.17
	(26.481)	(21.25)	(95.08)	(45.41)
$\tau = 0.1$	167.51**		480.39**	
	(80.77)		(215.28)	
$\tau = 0.2$	139.66**		450.86**	
	(63.03)		(183.13)	
$\tau = 0.3$	119.29**		411.16	
	(52.71)		(145.09)	
$\tau = 0.4$	98.02**		374.67***	
	(46.14)		(119.03)	
$\tau = 0.5$	77.09*		348.94***	
	(45.67)		(109.42)	
$\tau = 0.6$	60.75		317.37***	
	(49.60)		(111.11)	
$\tau = 0.7$	36.80		287.42**	
	(60.63)		(125.73)	
$\tau = 0.8$	14.24		255.02*	
	(74.17)		(151.43)	
$\tau = 0.9$	-2.70		226.01	
	(85.63)		(179.72)	

Notes: *, **, *** indicate statistical significance: * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$.

Source: own study based on WDI and WGI (2019) and Penn World Table data.

Conclusions

The situation of the agricultural sector in SSA countries is a resultant of many historical (pre-colonial, colonial and post-colonial), geoclimatic, social and political factors. While most of them are given and the potential for change is excluded or very limited, the quality of governance and political stability can be

adjusted. The results of the studies are consistent with those of Hayami and Ruttan (1971), Hall and Jones (1997), and Lio and Liu (2008) on the links between the quality of governance and agriculture. The quality of governance is, according to many researchers, a key element in poverty reduction and regional development. In this context, the study in current institutional (and constitutional) economics, as well as the related trend of economic analysis of law, is not only of cognitive but also of practical value. The results of the study suggest that the improvement in one of the elements of government quality, namely political stability, may contribute to an increase in agricultural productivity in agricultural countries in Africa, taking into account the links between political stability and the scale of the use of fertilisers in agricultural activity (which indicates a shift in methods to more modern ones). Moreover, the results of the study show that the links between political stability and GDP per capita are stronger in the case of the poorest countries, which means that a country may break out of the vicious circle of poverty when its political situation ceases to be a threat to its people. This is also of relevance for agricultural organisations and institutions. As early as in 2012, the FAO's Intergovernmental Committee on World Food Security adopted "Voluntary Guidelines on the Responsible Governance of Tenure". The basic principles of responsible legal title management include values consistent with the general principles of good governance: recognition of rights to land and resources, respect for human dignity and freedom from discrimination, equality and justice, the rule of law, a holistic and balanced approach, participation, transparency and accountability. The importance of the quality of governance, including political stability, goes beyond agriculture, as it has become an important factor in reducing extreme poverty and implementing sustainable development.

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Summary

The agricultural countries of sub-Saharan Africa remain the least economically advanced region of the world, with the relatively lowest quality of life. The agricultural sector plays a particularly important role in the economies of these countries. However, it is underdeveloped as a result of factors such as inadequate agricultural policy, institutional instability, chronic droughts, epidemics, deterioration of the environment, deteriorating infrastructure and insufficient investment in agricultural research in sub-Saharan Africa. The aim of the paper is to examine the impact of political stabilization on the economic growth in these countries. We were also inclined to determine what the interdependences were between political stability and factors important for agricultural activity for both agricultural and non-agricultural sub-Saharan counties in the 1995–2017 period. The methods used in this research included panel models with fixed effects, non-parametric tests and quantile regression. It was found that stabilizing the political situation and lowering the level of conflict risk contributed to the growth of GDP per capita in both agricultural and non-agricultural countries. However, in agricultural countries, it also influenced the modernization of agricultural production methods and a shift in the proportion of agricultural production in the total volume of imports and exports. Furthermore, it was found that political stability contributed to a greater extent to the improvement of GDP per capita in the lowest income countries.

Keywords: political stability, sub-Saharan Africa, agriculture, institutional economy.

Wpływ stabilności politycznej na wzrost gospodarczy w rolniczych krajach subsaharyjskich

Streszczenie

Kraje rolnicze Afryki Subsaharyjskiej pozostają najmniej zaawansowanym gospodarczo regionem świata, o relatywnie najniższej jakości życia. Szczególne znaczenie w gospodarkach tych krajów ma sektor rolniczy. Jest on jednak słabo rozwinięty, co wynika z czynników takich, jak wadliwa polityka rolna, niestabilność instytucjonalna, chroniczne susze, epidemie, degradacja środowiska, pogorszenie infrastruktury oraz niewystarczające inwestycje w badania naukowe w dziedzinie rolnictwa w Afryce Subsaharyjskiej. Celem artykułu jest zbadanie wpływu stabilizacji politycznej na wzrost gospodarczy w tych krajach. Analizowane były też związki między stabilnością polityczną a czynnikami istotnymi z punktu widzenia działalności rolniczej, zarówno w rolniczych, jak i nierolniczych krajach Afryki Subsaharyjskiej w latach 1995–2017. W badaniach wykorzystano modele panelowe z efektami stałymi, testy nieparametryczne oraz regresję kwantylową. Stwierdzono, że stabilizowanie sytuacji politycznej i obniżanie poziomu zagrożenia konfliktem przyczyniało się do wzrostu PKB *per capita* zarówno w krajach rolniczych, jak i nierolniczych. Niemniej, w krajach rolniczych wpływało także na unowocześnianie metod produkcji rolniczej oraz na zmianę udziału produkcji rolnej w wolumenie importu i eksportu. Ponadto ustalono, że stabilność polityczna przyczyniała się silniej do poprawy PKB *per capita* w krajach o najniższych dochodach.

Słowa kluczowe: stabilność polityczna, Afryka Subsaharyjska, rolnictwo, ekonomia instytucjonalna.