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GEOGRAPHY OF THE EUROPEAN UNION DEVELOPMENT AID ALLOCATION

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Abstract
The European Union (EU), its institutions and Member States, represents the largest donor of development aid in the world. The present paper deals with the territorial distribution of EU's official development assistance (ODA). The aim of this paper is to identify the major determinants affecting the territorial allocation of ODA provided by the EU institutions and to examine whether the geographical distribution of official development assistance of the European Union institutions is influenced more by donor interests or recipient needs. The paper is devoted to the theoretical basis determining the territorial distribution of the amount of ODA and to actual distribution of aid from the EU institutions among developing countries that are eligible to receive ODA. Based on OECD data on the EU institutions aid allocation between 2010 and 2019, we conclude that the distribution is influenced by both donor self-interest (EU interests) and recipient needs (developmental needs of recipient countries). However, the most significant determinant associated with higher amounts of total net ODA disbursements seems to be the European Neighbourhood Policy status as well as the European Union (potential) candidate status of the recipient countries. Therefore, EU's geopolitical and geostrategic interests in its neighbourhood significantly influence the decision-making process on aid allocation.

Key words
Aid allocation, European Union, official development assistance, ODA.

INTRODUCTION

The European Union and its Member States provide more than half of the global official development aid (European Commission, 2018). Some of its Member States are among the largest donors in the world as they are, at the same time, among the largest world economies. Certain European Union countries also have a history of

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colonising different parts of the world, resulting in a closer relationship with some developing countries.

The main aim of this paper is to examine the determinants of official development aid (ODA) distribution from the institutions of the European Union. This paper is devoted to the theoretical basis determining the territorial distribution of the volume of official development aid and to actual distribution from the European Union institutions among developing countries that are eligible to receive ODA.

In the case of the European Union, the geographical focus of ODA is declared in the European Consensus on Development from 2017. The consensus says that *"development cooperation will continue to be country- or region-specific, based on partners' own needs, strategies, priorities and resources"* (European Commission, 2017). This document states that the EU and its Member States will target development cooperation particularly at the poorest countries and countries where the need is greatest and where it can have most positive impact. More specifically, the European Consensus on Development underlines a strong preference of African countries, least developed countries, failing and fragile states, and countries plagued by conflict. The consensus reaffirms poverty eradication as the EU's primary development objective, but it also integrates the economic, social, and environmental dimensions of sustainable development (European Commission, 2017). It is important to notice that the document also states that it fully respects the priorities and interests of individual Member States in the territorial distribution of their development assistance.

This paper is organized as follows. In the first part of this paper, we deal with literature review on the determinants of the territorial distribution of official development aid as identified in the literature on aid donors in general and specifically on the European Union. Another important base for our model is a comparison of development policies of individual EU member states. In the second part of this paper, we describe the geographical distribution of ODA provided by the EU institutions based on data obtained from OECD. The subsequent section describes methods and data applied in this paper. In the last part of this paper, we present the results of regression analysis using the generalized least squares method of estimation to examine the determinants that influence geographical distribution of ODA provided by the EU institutions. Our main purpose is to determine whether allocation of development aid is more oriented towards donor interest or recipient need. Conclusion summarizes the main takeaways from our analysis.

GENERAL DETERMINANTS OF DEVELOPMENT AID TERRITORIAL DISTRIBUTION

The territorial distribution of development aid among developing countries tends to be influenced by several factors. Scientific studies of this matter focus mainly on the factors determining the development assistance of individual states. For

example, Zengin and Korkmaz (2019) state that Turkey's development aid is higher for countries where Islam is the predominant religion, where Turkey exports more or where the per capita income is lower. The former Ottoman territories and the Turkic states also receive comparatively higher amounts of official development aid from Turkey. Tuman and Ayoub (2004), as well as Cooray and Shahiduzzaman (2004), have dealt with the distribution of Japanese development aid and both state that territorial distribution is the result of a combination of recipient countries' needs and Japan's interests, such as mutual international trade and Japanese security interests.

The studies of ODA distribution by several donor countries identify common factors influencing donor community in general. One such study by Alesina and Dollar (2000) looks at data from 21 donor countries in the period between 1970 and 1994 and finds that poverty, democracy and policy determinants are less important in influencing the amount of aid by major donors. More important factors influencing ODA distribution varied among donors, but included colonial history (France), geopolitical interests (USA) and common interests demonstrated by voting patterns within the United Nations (Japan).

The level of ODA disbursement in individual countries is determined not only by country's geopolitical interest, but also by the preferences of its own citizens. Paxton and Knack (2008) studied the individual- and country-level factors influencing ODA levels in donor countries and identified several factors influencing the support for ODA, such as religiosity, attention to international affairs, wealth, or colonial history. In addition, the authors identified preferences of citizens that may influence geographical distribution of ODA. Especially in the case of the US, people were opposed to providing ODA to countries with high levels of corruption. Citizens' preferences can therefore influence not only the amount of ODA provided, but also its geographical distribution.

This approach is similar to the paper by Dudley and Montmarquette (2012) who describe aid as a good which is consumed indirectly by the residents of the donor country. Both decisions about whether to give aid and about the amount of aid given were influenced by per capita income in recipient country and economic, political and bandwagon considerations.

Neumayer (2003) focused on multilateral donors, specifically development banks and UN agencies. Based on his results, he included small populations of the recipient countries, the geographical distance from the Western powers and the needs of the recipient countries among the determinants positively correlated with the amount of development aid. On the contrary, he did not find the impact of respect for human rights or levels of corruption in the recipient countries on the amount of development aid provided by these multilateral donors.

Kim and Jensen (2017) and Neumayer (2005) focused on the determinants of the distribution of European Union development aid and humanitarian aid. Both

papers state that aid flows from the European Union are mainly driven by the needs of the recipient countries and that EU's economic interests do not play a significant role. In case of Neumayer's paper, where he focused on the allocation of food aid by donor countries and multilateral donors, he found some preference of donor countries towards geographically closer recipient countries. However, he did not find an impact of former colonial relationship or trade and military ties to have significant impact. European Union food aid was particularly correlated to the needs of recipient countries. When studying EU's development assistance allocation, Kim and Jensen (2017) found that among other factors, the recipient countries' level of human rights was important for development assistance disbursements by the EU.

The principle that development assistance and humanitarian aid are mainly allocated according to recipient needs and not in accordance with geopolitical interests applies not only to ODA flows from the EU institutions, but also to development aid provided by non-governmental organizations from Europe, as pointed out by Nancy and Yontcheva (2006). However, they studied only flows by non-governmental organizations co-financed by the European Union, as the data about other non-governmental flows are less accessi-ble. This means that the flows studied by the authors reflect more the distribution preferences of the European Union institutions than the preferences of the NGOs.

The member states of the European Union display different preferences in deciding on the allocation of their bilateral development assistance. Three biggest economies in the European Union (during the period studied in our paper) France, Germany, and the United Kingdom, were studied by Lebovic (2005). He claims that, in addition to considerations about the allocation of development assistance, donors consider their involvement in relation to other donors (whether to become the primary donor). Based on his data, France follows its trade interests, the United Kingdom its political and security interests and both donors focus on their former colonies. On the other hand, Germany rarely assumes the position of primary donor resulting from their weaker global presence during the Cold War era.

The smaller western European donors also approach ODA differently, most notable differences were identified between the Netherlands and Belgium (Breuning, 1995). While the Netherlands has distinctive development policy, Belgian development policy is part of their foreign economic policy. This also influences the structure of recipient countries, together with tighter relations of these countries with their former colonies, especially in case of Belgium.

Italian official development assistance (Neumayer, 2003) shows no preference towards recipient countries respecting political and civil rights or having more democratic regimes, as the most important factor influencing its ODA distribution is former colonial ties. The amounts of Italian development aid are higher for poorer countries and countries with lower military expenditure.

Former colonies and countries with historical and cultural links have preference among recipients of Spanish official development assistance. Spanish Development Cooperation Law states that the priority areas of Spanish ODA from geographical point of view are Latin American countries and Arab countries of North Africa and the Middle East. Other factor that should be considered when distributing ODA are the degree of human development of the recipient country and the impact of Spanish ODA there (Herrera and Escuela, 2015).

Another group of generous donors within the EU, Nordic countries, shows strong preference towards recipients from Africa, despite not having strong historical ties with the continent. The share of bilateral ODA from Sweden, Denmark and Finland to Africa is higher than the EU average (Selbervik and Nygaard, 2006).

Four EU member states from Visegrad Group follow different patterns of ODA allocation, where the key factor seems to be the geographic proximity. Significant share of ODA from Slovakia, Poland, Hungary and the Czech Republic flows to the Western Balkans and post-Soviet region. ODA distribution from these countries is consistent with their economic and political interests and continuation of historic ties. More importantly, these factors are more influential than recipient countries' needs (Szent-Iványi, 2012).

The group of the three emerging donor countries within the European Union, the Baltic states, is not yet fully included in international donor community of OECD Development Assistance Committee (DAC). However, Estonia, Latvia and Lithuania have begun to develop their development policy. The three Baltic states identified former USSR countries as the most important recipients of their ODA, arguing that in these countries ODA can make the most significant differences. Therefore, they are most similar to Visegrad Group countries regarding the patterns of ODA distribution (Andrespok and Kasekamp, 2012).

DEVELOPMENT ASSISTANCE PROVIDED BY THE EUROPEAN UNION INSTITUTIONS

The institutions of the European Union together with EU Member States continue to account for the largest share of the total worldwide ODA, and they have the development cooperation presence in all regions and across all sectors (OECD, 2020). In 2019, the Member States of the European Union and the European Union institutions provided development aid that amounted 75.2 billion US$, which together accounted for about 55.2% of the total ODA provided to developing countries by members of the OECD Development Assistance Committee (Council of the EU, 2020). According to the share of the volume of collective ODA from the EU and its member countries in gross national income of the EU, which reached the share of 0.46% in 2019, the European Union is in the first place and significantly exceeds the

average ratio of non-EU members of the OECD Development Assistance Committee (Council of the EU, 2020).

The development assistance provided by the institutions of the European Union has the variable trend during the period under review (2009-2019). The largest volume of official development assistance from the EU institutions was provided in 2016 – 17.75 billion US$ at constant prices. Compared to the beginning of the period under review (2009 – 11.87 billion US$), we can observe an increase of almost six billion US$ between 2009 and 2016. However, the total amount of development aid provided by the EU institutions has declined since 2016. According to the latest data, development aid provided by the institutions of the EU in 2019 reached the level of 14.91 billion US$ (OECD, 2021). In addition, the EU institutions play a significant role in mobilising private funding for development.

A typical feature of the development assistance from the European Union institutions is their bilateral basis. In 2019, gross bilateral development assistance accounted for about 98% of total ODA. Of this volume, approximately 22% of development aid was provided through multilateral organizations – earmarked contributions. According to the European Commission (2021), the main sectors of development aid provided by the institutions of the EU in 2019 were government and civil society (3.12 billion EUR), emergency response (1.85 billion EUR), banking and financial services (1.49 billion EUR), transport and storage (1.23 billion EUR), education (0.89 billion EUR), and agriculture, forestry and fishing (0.87 billion EUR). The top ten recipient countries of ODA provided by the EU institutions in 2019 were Turkey, Egypt, Morocco, Syrian Arab Republic, Ukraine, Afghanistan, Serbia, Tunisia, West Bank and Gaza Strip, and Iraq (European Commission, 2021). Thereby, the largest recipients of ODA from the European Union institutions are, except for Afghanistan and Iraq, the EU's partners within the European Neighbourhood Policy (ENP) and candidate countries such as Turkey and Serbia.

As illustrated by Figure 1, development assistance of the EU institutions is primarily focused on Africa, especially Sub-Saharan Africa, Asia and Europe. The region that has received the largest share of ODA provided by the EU institutions throughout the entire period under review is Sub-Saharan Africa (Figure 1). In 2019, approximately 33% of total EU institutions' ODA was allocated to Sub-Saharan Africa. The share of ODA allocated to Sub-Saharan Africa ranges between 25% (2016) and 38% (2010) in the period considered. The second region that receives the most ODA from the EU institutions is Asia. According to the current OECD data, the share of the EU institutions' development aid to that region represented 22% in 2019. More specifically, the main recipient countries of Asian region are predominately concentrated in South & Central Asia, followed by Middle East and then Far East Asia (Figure 1). Considering Asia as a whole, developing countries from Europe represented the third largest region to which the EU institutions allocated development aid in 2019. Figure 1 reports that aid allocated to developing countries

of Europe has sharply decreased in the period 2011-2019. Latin America and the Caribbean received approximately 5% of the EU institutions' official development assistance in 2019. The share of ODA allocated to Latin America and the Caribbean shows a declining trend. The lowest share of ODA from the European Union institutions is allocated to the region of Oceania.

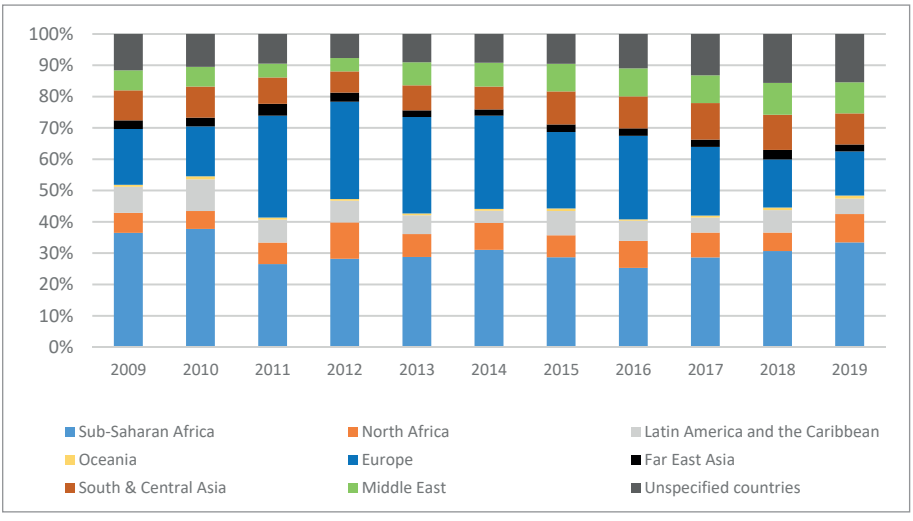

Fig. 1
Development assistance provided by the European Union institutions according to the recipient regions (in %)
Source: Own processing according to OECD (2021): Aid (ODA) disbursements to countries and regions [DAC2a]

The dynamics of the evolution of official development assistance from the European Union institutions varies considerably by region. As shown in Figure 2, the development aid directed towards Africa is volatile with a moderate increase during the period under review. In 2019, African countries received almost 7 billion US$ in official development assistance from the EU institutions. The largest amounts were allocated to Egypt (545 million US$), Morocco (440 million US$), Mali (206 million US$), Democratic Republic of the Congo (205 million US$), Ethiopia (201 million US$), Nigeria (187 million US$), Tunisia (182 million US$), Niger (173 million US$) and Somalia (165 million US$). Among them, Democratic Republic of the Congo, Ethiopia, Mali, Niger and Somalia are classified as the least developed countries (LDCs). Cooperation and support for the African region takes place through many programs, facilities and funds, such as the Pan-African program, the African Peace Facility (APF), the European Union Emergency Trust Fund (EUTF), the African Investment Platform (AIP), the EU-Africa Infrastructure Trust Fund (EU-AITF) and others (European Commission, 2020).

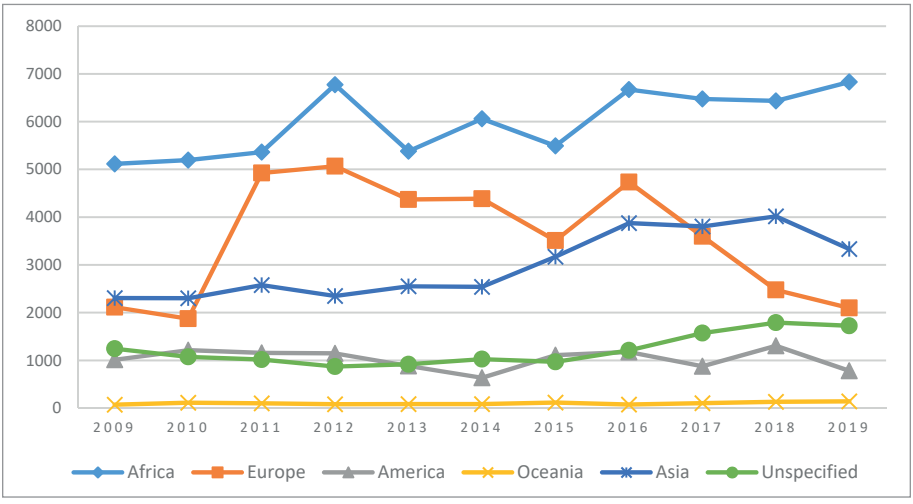

Fig. 2
Development assistance from the European Union institutions to developing regions (million USD, constant prices)
Source: Own processing according to OECD (2021): Aid (ODA) disbursements to countries and regions [DAC2a]

After steady growth in the last 10 years, Asia surpassed Europe in 2017 as the second largest recipient of ODA provided by the EU institutions (Figure 2). In 2019, Asian countries received approximately 3.3 billion US$ in development assistance from the European Union institutions. Among the most important recipient countries within Asian region in 2019, we can find conflict-ridden countries such as Syrian Arab Republic (443 million US$) Afghanistan (416 million US$), West Bank and Gaza Strip (234 million US$), Iraq (232 million US$) and Yemen (208 million US$). Considerable amount of ODA was also allocated to the world's second most populous country – India (186 million US$).

From a regional point of view, developing countries of Europe represent the third largest recipient of ODA provided by the EU institutions (Figure 2). In 2012, the EU institutions' development assistance to European countries reached its peak for the period considered – more than 5 billion US$. A similar level of development aid to European countries was in 2016, after which we can observe a significant decline to the present day. In 2019, development assistance from the European Union institutions towards European developing countries was more than 2 billion US$. According to OECD data, the largest European recipient countries in 2019 were Ukraine (413 million US$), Serbia (193 million US$), Moldova (167 million US$), Kosovo (156 million US$) and Bosnia and Herzegovina (148 million US$).

The trend in the evolution of development aid provided to developing countries of the Americas is steady from 2009 to 2019, but at a very low level. At present,

the EU institutions' development assistance to Latin America and the Caribbean amounts for 783 million US$ (Figure 2). The beneficiary countries that receive the most aid from the EU institutions are Ecuador (78 million US$), Colombia (68 million US$), Honduras (67 million US$), Bolivia (66 million US$), Haiti (57 million US$) and Venezuela (55 million US$). The lowest share of development aid provided by the European Union institutions is directed to the Oceania region. In 2019, the level of development assistance directed towards that region amounted 142 million US$. Papua New Guinea (48 million US$), Solomon Islands (12 million US$), Fiji (12 million US$), Samoa (7 million US$) and Marshall Islands (4 million US$) accounted for the largest share of development aid from the EU institutions.

DATA AND METHODS

The aim of this paper is to empirically identify the major determinants that influence the territorial allocation of official development assistance (ODA) provided by the institutions of the European Union and to examine whether the geographical distribution of the European Union institutions' official development assistance is influenced more by donor interest or recipient need. These two approaches are combined in geographical distribution of EU member states, with donor interest prevailing in Visegrad Group countries and Baltic states and recipient need being more important in western part of the European Union.

There are two main empirical approaches to analysing the determinants of development aid allocation. First, recipient need–donor interest (RN–DI) modelling approach, on the one hand, examines economic, political and strategic interests of the donor countries and, on the other, economic, humanitarian and other development needs of the recipient countries. The recipient need (RN) and donor interest (DI) are usually estimated in two separate regression equations, using different variables specific to each aspect of aid allocation (McGillivray, 2003). The most commonly used method for estimating the RN–DI models is ordinary least squares (OLS) method. However, there is a strong evidence that the RN–DI approach consisting in two separate equations provides biased results (see for instance Bowles, 1987). Second, more recent hybrid models of aid allocation group the determinants of both recipient need (RN) and donor interest (DI) into a single regression equation. The present paper belongs to this empirical approach. According to Berthélemy and Tichit (2002), more recent literature on aid allocation uses different econometric approaches that are also suitable for modelling with limited (censored) dependent variable, such as a two-part model, the most commonly applied Tobit model, or rarely used Heckman's two-step model.

Since the European Union belongs to the largest donors of development aid in the world, there are almost no countries eligible to receive ODA with zero aid allocations during the period 2010–2019. We do not have a limited dependent variable, and therefore we do not employ a model that considers a zero value in the

dependent variable not just as a number but as a code, such as the Tobit model. In this research, we use panel data regression applying the generalized least squares (GLS) method of estimation in cross section weights. A panel data set consists of a time series for each cross-sectional member in the dataset and offers a variety of estimation methods (Asteriou and Hall, 2016). Researchers such as Cooray and Shahiduzzaman (2004) applied GLS method of estimation in cross section weights to identify empirically the major determinants of Japanese aid allocation in the period of 1981–2001. The generalized least squares method is applied to avoid heteroskedasticity that may occur in the data (Asteriou and Hall, 2016).

Our sample includes all developing countries which are eligible to receive official development assistance (i.e., countries on the DAC list of ODA recipients over the period examined) and for which the majority of relevant data are available. More specifically, we base our study on a comprehensive panel dataset covering 139 recipient countries of the European Union institutions' development assistance in the period from 2010 to 2019. This means that the present research potentially comprises 1,390 observations (139 countries x 10 years). The period, over which the data spans, allows us to examine the patterns of the EU institutions' development aid allocation after the 2008-09 global financial crisis.

Based on the review of theoretical and empirical literature on development aid allocation, we employ the following variables. As the dependent variable, we use total net aid (ODA) disbursements *(lnODA_EU)* to developing countries from the EU institutions at constant prices. The data on ODA are obtained from OECD statistics. According to OECD (2015), aid disbursement records the actual international transfer of financial resources, or of goods or services valued at the cost to the provider. Therefore, aid disbursements reflect the actual expenditures incurred by a donor on development assistance as compared with aid commitments that reflect a donor's commitment to provide resources under specified terms and conditions, for specific purposes and for the benefit of the aid beneficiary.

The independent variables of this research may be divided into four main categories: donor self-interest, recipient need, recipient merit and control variables (see for instance Hoeffler and Outram, 2008). The economic self-interests of the European Union are proxied by its total export of goods *(lnEX_EU)* to a particular country in a given year. The data on total EU exports are obtained from ITC Trade Map. According to researchers, such as Harmáček et al. (2017), a higher volume of exports from a donor country to a recipient country may positively influence the donor's decision to allocate more aid in favour of that recipient country. We employ the European neighbourhood dummy variable *(EN_D)* to cover geopolitical and geostrategic self-interests of the EU in the beneficiary countries. The dummy takes value of one for EU candidate and potential candidate countries as well as for those countries that belong to the European Neighbourhood Policy, and otherwise zero.

The most commonly used explanatory variable that reflects the recipient need is income or output per capita. As a proxy for the recipient need, we use GDP per capita *(lnGDP_PC)* at constant (2015) prices obtained from UNCTAD database. Developing countries with a higher level of economic development are expected to receive less aid, and therefore there should be a negative relationship between total aid disbursements and GDP per capita. Furthermore, if development aid is allocated according to recipient needs, then the least developed countries (LDCs) should receive more than the relatively wealthier countries (Cooray and Shahiduzzaman, 2004). In this context, we test whether the EU provides more assistance to the least developed countries applying the LDC dummy variable *(LDC_D)*. This dummy takes value of one for those countries which are on the United Nations list of least developed countries, otherwise zero. To cover the developmental needs of the recipient countries more comprehensively, we also employ a social performance indicator. The social development variable is proxied by under-five mortality rate *(lnMORT)* that is the probability per 1,000 live births that a newborn baby will die before reaching age five (World Bank, 2021). The data on under-five mortality rate come from the World Bank's World Development Indicators. However, according to Berthélemy and Tichit (2002), infant mortality rate can be viewed by donors as a measure of need, but also as an indicator of quality or performance of the recipient country's social policy. The relationship between the amount of aid disbursements and the under-five mortality rate is therefore ambiguous.

According to Hoeffler and Outram (2008), the recipient merit variables analyse whether donors allocate more aid to developing countries with good policies and more democratic regimes. Stubbs et al. (2016) and many other researchers argue that donors may prefer recipient countries that perform well in terms of good governance and appropriate institutions. We use government effectiveness indicator *(lnGOVEF)* that belongs to the six dimensions of governance constituting the Worldwide Governance Indicators (WGI) published yearly by the World Bank. Government effectiveness reflects perceptions of the quality of public services, the quality of policy formulation and implementation, as well as the credibility of the government's commitment to such policies (Kaufmann et al., 2010). If it is measured in percentile rank terms, the indicator ranges from 0 (lowest) to 100 (highest) rank, with higher values corresponding to better outcomes. Therefore, a positive relationship between aid disbursements and government effectiveness is expected. Another recipient merit variable used in this study is a political regime dummy variable *(REG_D)*. The dummy is equal to one for those countries that are classified as democracies, and otherwise (autocracies, anocracies, failed and transitional states) zero. This allows us to examine whether the EU prefers democratic recipient countries over non-democratic ones in terms of the volume of aid granted. The data on the type of political regime come from the Polity IV and Freedom House datasets.

As a control variable, we employ the total population *(lnPOP)* of the recipient countries. The data on total population, which is based on the de facto definition of population, come from the World Bank's World Development Indicators. A positive relationship between total aid disbursements and total population of the beneficiary is expected, as more populous developing countries tend to need a higher volume of aid. However, some researchers such as Neumayer (2003) argue that less populous countries receive more aid than more populous ones for several reasons, such as decreasing marginal benefits of aid allocation as population increases or the limited capacity of large countries to absorb additional amounts of aid.

With regard to the fact that the decision-making process on aid allocation precedes aid disbursements, all explanatory variables are in one year lag except for the dummy variables. The dependent variable and explanatory variables, such as GDP per capita, total EU exports, total population and under-five mortality rate, are employed in natural logarithmic form as they are measured at different scales. The general form of the regression equation is:

$$lnODA\_EU_{i,t} = \beta_0 + \beta_1 lnEX\_EU_{i,t-1} + \beta_2 EN\_D_{i,t} + \beta_3 lnGDP\_PC_{i,t-1} + \beta_4 LDC\_D_{i,t} + \beta_5 lnMORT_{i,t-1} + \beta_6 lnGOVEF_{i,t-1} + \beta_7 REG\_D_{i,t} + \beta_8 lnPOP_{i,t-1} + \varepsilon_{i,t} \quad (1)$$

where the subscripts i and t refer to a recipient country and time (year), respectively, and ε is normally distributed error term.

RESULTS AND DISCUSSION

The results of regression using the generalized least squares method of estimation in cross-section weights are reported in Table 1. The adjusted R-squared is sufficiently high for the cross-sectional and time series nature of the study. Overall, selected explanatory variables account for about 75% of the variability in total net aid (ODA) disbursements from the EU institutions (Table 1). To detect potential problems of multicollinearity between the explanatory variables, we employ the variance inflation factor (VIF). Since the VIF values for independent variables do not exceed 5, there is no evidence of the existence of problematically high multicollinearity (Asteriou and Hall, 2016). In our study of the geographical distribution of ODA from the European Union institutions, all explanatory variables are statistically significant at 1% and 5% levels (see Table 1). The overall results show that explanatory variables influence the allocation of the EU institutions' development assistance in accordance with the literature review.

There exists a positive relationship between ODA disbursements from the EU institutions and explanatory variables reflecting the needs of recipient countries such as under-five mortality rate or dummy variable for least developed countries. The infant mortality rate is therefore seen as a measure of developmental needs, rather than an indicator of a recipient country's social policy performance. Whereas the results indicate that the EU institutions allocate more aid to the recipient coun-

tries with worse social performance, the EU institutions seem to favour the beneficiary countries with better governance indicators as a 10% increase in government effectiveness of the recipient countries may raise ODA allocation from the EU institutions by approximately 0.3%. A strong focus on the recipient needs from the EU institutions side is clearly demonstrated by a negative relationship between total net ODA disbursements and GDP per capita. A 10% decrease in GDP per capita tends to increase net aid disbursements from the EU institutions by 5.3%.

Tab. 1 Estimated equation using panel EGLS (cross-section weights) method

Variable	Coefficient Estimates	t-statistics
EU exports *(lnEX_EU)*	0.0495*	2.5797
European neighbourhood *(EN_D)*	2.0895**	30.6475
GDP per capita *(lnGDP_PC)*	-0.5329**	-16.2931
Least developed countries *(LDC_D)*	0.1795**	3.7704
Under-five mortality rate *(lnMORT)*	0.1743**	5.1714
Government effectiveness *(lnGOVEF)*	0.0291*	2.3207
Political regime *(REG_D)*	0.2838**	8.3016
Total population *(lnPOP)*	0.3949**	21.0774
Constant	-0.3992	-1.0492
F-statistics (prob.)	510.0386 (0.0000)	
Durbin-Watson stat	0.8881	
Number of observations	1,348	
Adjusted R^2	0.7514	

Source: authors' own using EViews.
*Notes: Dependent variable is total net aid (ODA) disbursements. ** denotes significance at 1% level and * denotes significance at 5% level.*

The results also support the hypothesis that donor self-interests influence the decision-making on aid allocation, as EU exports and European neighbourhood dummy variable are positively and significantly associated with total ODA disbursements. The relationship between ODA disbursements and EU exports is positive and a 10% increase in EU exports may increase aid flows by approximately 0.5%. The countries that are part of the European Neighbourhood Policy and EU candidate, as well as potential candidate, countries also receive higher amount of development assistance from the European Union institutions. This is supported by our findings from the second part of this paper where we point out that the largest aid recipients from the EU institutions are, except for Afghanistan and Iraq, the EU's partners within the European Neighbourhood Policy and candidate countries such as Turkey and Serbia. Furthermore, the preference of geographically closer recipient countries is also evident in Neumayer's (2005) study, where he points out

that geographically closer countries tend to receive more total and emergency food aid from the EU.

The total population control variable has a positive relationship with total aid disbursements as expected. Therefore, the EU institutions tend to allocate more aid to more populous developing countries.

To determine whether the EU institutions' ODA is focused more on donor interest or recipient need, we compare the effects of the two pairs of variables: EU exports and European neighbourhood dummy variable representing donor interests, and GDP per capita and LDC dummy variable representing recipient needs. If we compare the impact of EU exports to GDP per capita, the latter has stronger impact on the amount of ODA, supporting stronger orientation on the recipient needs. However, the comparison of the two dummy variables, such as the European neighbourhood and the least developed countries dummy variables, brings the opposite result. Developing countries associated with the EU through European Neighbourhood Policy and EU candidate status receive significantly more ODA than least developed countries, although the latter are stated in the European Consensus on Development as the European Union's development policy priorities. The difference between the two coefficients is sharper than the difference in coefficients between EU exports and GDP per capita.

The system of development cooperation on the European Union level faces the challenge of incorporating differing interests of its Member States and its own commitment to provide ODA most effectively. This challenge is reflected within official documents of the EU. The most important document determining the framework of development cooperation of the European Union is the aforementioned European Consensus on Development from 2017, which reflects the global commitment towards achieving UN Sustainable Development Goals. Regarding geographical priorities of the EU development cooperation, the document describes development cooperation of the EU as ranging from providing funding for the neediest developing countries to cooperation with middle-income countries based on partnership and policy dialogue, thus the EU development aid budget should be directed towards poorest developing countries. This commitment is further spelled out by naming geographical priorities of the EU development cooperation as least developed countries, African countries, and fragile states. However, the proclamation is lessened by the statement that the consensus fully respects member states' ODA allocation priorities.

The description statistics in our paper shows that in accordance with the stated priorities, developing countries in Africa receive the highest share of ODA. The commitment is further visible in marked decline of ODA allocated to European countries since 2016 (see Figure 2).

Based on our results, all statistically significant explanatory variables influence the amount of ODA in accordance with previous studies. Developing countries

with lower levels of per capita GDP, higher child mortality and LDCs receive higher amounts of ODA, which is in accordance with the priorities stated in the European Consensus on Development. Although the document does not mention other factors influencing distribution of ODA, we find that donor-interest variables, such as EU exports and European neighbourhood dummy variable covering geopolitical self-interests of the EU, also significantly influence the amount of ODA. The European Consensus on Development states that ODA should be allocated to countries where it can be most effective, which may explain the positive impact of government effectiveness indicator, which reflects the quality of policy formulation and implementation, on the amount of development assistance from the EU institutions. However, if we compare the impact of variables of recipient need and donor interest, the latter seems to have a bigger impact on the amount of allocated ODA. This result seems to contradict the proclamations of geographical priorities of the European Consensus on Development from 2017.

The results of our model suggest that the geographical allocation of development assistance from the European Union institutions combines the principles of both donor interests and recipient needs, gravitating more towards donor-interest variables. This is supported by Hout (2013) who finds that the recipient needs played a seemingly subordinate role to economic and political donor self-interests in decisions on EU aid allocation in the period from 2007 to 2013. This allocation of ODA, primarily based on donor interests, is more typical for eastern European Union Member States, while traditional donors' aid distribution gravitates more towards recipient needs. We therefore state that actual distribution of ODA from the EU institutions does not fully mirror the statements in the European Consensus on Development from 2017, which does not necessarily constitute criticism. The paper only studies ODA allocation and not the efficiency and other aspects of provided ODA.

CONCLUSIONS

The present study empirically analyses the geographical distribution of official development assistance provided by the EU institutions. It deals with the disbursements of ODA from European Union institutions between 2010 and 2019. The aim of this paper was to evaluate the possible determinants of development aid distribution from European Union institutions based on the different approaches characterized by either donor interest or recipient need.

The empirical results suggest that the geographical distribution of aid provided by the EU institutions is influenced by all the factors, which we have analysed in the present study. In general terms, the relationship between explanatory variables and total net ODA disbursements follows the predictions stemming from literature review on the determinants of aid allocation. If we compare the impact of selected

explanatory variables associated with the donor interest and those representing developmental needs of the recipient countries, we can draw several conclusions from our results.

The status of the European Neighbourhood Policy partners and the status of an EU candidate country appear to be the most robust determinant in terms of the decision-making on the amount of official development aid that the EU institutions allocate to developing countries. Furthermore, the impact of being a part of the European Neighbourhood Policy seems to be a stronger factor of aid allocation than the impact of being a least developed country. These results show that ODA distributed by the EU institutions is closer to the strategy of newer member states and emerging donors, such as Visegrad Group countries or Baltic states. The development policy of founding members of the EU is reflected in a positive relationship between EU exports and the amount of ODA. Although least developed country status has a positive impact on the amount of aid, the effect is significantly weaker than the effect of European neighbourhood. This finding is in contrast mainly with the development policies of the most generous donors of northern Europe. These results also show slight deviation from stated territorial priorities of the European development policy, however, they are very broad.

To sum up, EU's geopolitical and geostrategic self-interests in its neighbourhood seem to be the predominant determinant regarding the patterns of development aid allocation from the EU institutions. This is supported by both results of regression and analysis of the largest aid recipients from the EU institutions. In terms of policy implications, the EU institutions should allocate more development aid in accordance with the developmental needs of the recipient countries to assist in eradicating poverty, reducing vulnerabilities, and achieving the UN's Sustainable Development Goals. As mentioned in the European Consensus on Development, *"by contributing to the achievement of the 2030 Agenda, the EU and its Member States will also foster a stronger and more sustainable, inclusive, secure and prosperous Europe"* (European Commission, 2017).

The conducted study is based on panel data regression analysis and does not capture the potential changes, and therefore does not answer the question whether the development policy of the EU is shifting more towards donor interest or recipient need associated with the determinants of aid allocation. The future research might also focus on the comparison of development policies of individual Member States of the European Union and the factors influencing their decisions.

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REFERENCES

ALESINA, A., DOLLAR, D. (2000). Who Gives Foreign Aid to Whom and Why? *Journal of Economic Growth*, 5, 33-63.

ANDRESPOK, E., KASEKAMP, A. (2012). Development Cooperation of the Baltic States: A Comparison of the Trajectories of the Three New Donor Countries. *Perspectives on European Politics and Society*, 13, 1, 117-130.

ASTERIOU, D., HALL, S. (2016). *Applied Econometrics*, 3rd edition. London: Palgrave.

BERTHÉLEMY, J., TICHIT, A. (2002). Bilateral donors' aid allocation decisions: A tree-dimensional panel analysis. In *The United Nations University World Institute for Development Economics Research (UNU-WIDER)* [online]. no. 2002/123 [accessed on 17 March 2021]. Retrieved from: https://www.econstor.eu/bitstream/10419/52813/1/369444361.pdf.

BOWLES, P. (1987). Foreign aid and domestic savings in less developed countries: Some tests for causality. In *World Development,* 15, 6, 789-796.

BREUNING, M. (1995). Words and Deeds: Foreign Assistance Rhetoric and Policy Behaviour in the Netherlands, Belgium, and the United Kingdom. *International Studies Quarterly*, 39, 2, 235-254.

COORAY, N. S., SHAHIDUZZAMAN, Md. (2004). Determinants of Japanese aid allocation: An econometric analysis. In *Journal of IUJ Research Institute* [online]. no. 4 [accessed on 9 March 2021]. Retrieved from: https://eprints.usq.edu.au/6295/4/Cooray_Shahiduzzaman_2004_PV.pdf.

COUNCIL OF THE EU, 2020. Výročná správa na rok 2021 pre Európsku radu o cieľoch rozvojovej pomoci EÚ závery Rady. Retrieved from: https://data.consilium.europa.eu/doc/document/ST-8628-2020-INIT/sk/pdf. Accessed on 9 March 2021.

DUDLEY, L., MONTMAEQUETTE, C. (2012). Supply of foreign aid. *American Economic Review*, 66, 1, 132-142.

EUROPEAN COMMISSION, 2017. The New European Consensus on Development 'Our World, Our Dignity, Our Future'. Retrieved from: https://ec.europa.eu/international-partnerships/system/files/european-consensus-on-development-final-20170626_en.pdf. Accessed on 28 January 2021.

EUROPEAN COMMISSION, 2018. EU remains the world's leading donor of development assistance: €75.7 billion in 2017. Retrieved from: https://ec.europa.eu/commission/presscorner/detail/en/IP_18_3002. Accessed on 10 March 2021.

EUROPEAN COMMISSION, 2020. Africa-EU cooperation. Retrieved from: https://ec.europa.eu/international-partnerships/africa-eu-cooperation_en. Accessed on 21 February 2021.

EUROPEAN COMMISSION, 2021. EU Aid Explorer. Retrieved from: https://euaidexplorer.ec.europa.eu/content/explore/recipients_en. Accessed on 15 June 2021.

HARMÁČEK, J., SYROVÁTKA, M., OPRŠAL, Z. (2017). Factors of Czech Aid Selection and Allocation: Panel Probit and Tobit Analysis. *Politická ekonomie*, 65, 2, 179-197.

HERRERA, C., ESCUELA, M. (2015). Analysis of Spain's official development assistance: synthesis and reflections. In *Scientific Journal of Economics and Business Management* [online]. [accessed on 6 March 2021]. Retrieved from: https://books.google.sk/books?hl=sk&lr=&id=_NghCgAAQBAJ&oi=fnd&pg=PA57&dq=official+development+assistance+of+spain&ots=GRXdsjFbI_&sig=naQs9x7BCY1tEcmI0NJJMbotn8U&redir_esc=y#v=onepage&q=official%20development%20assistance%20of%20spain&f=false.

HOEFFLER, A., OUTRAM, V. (2008). Need, Merit or Self-Interest – What Determines the Allocation of Aid? *Review of Development Economics*, 15, 2008-2019.

HOUT, W. (2013). Governance beyond the European Consensus on Development: What Drives EU Aid Selectivity? In *University of Mainz* [online]. [accessed on 16 June 2021]. Retrieved from: https://repub.eur.nl/pub/39277/.

KAUFMANN, D., KRAAY, A., MASTRUZZI, M. (2010). The Worldwide Governance Indicators: Methodology and Analytical Issues. In *World Bank Policy Research Working Paper* [online]. no. 5430 [accessed on 19 March 2021]. Retrieved from: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1682130.

KIM, Y., JENSEN, C. (2017): Preferences and institutions: constraints on European Union foreign aid distribution. *Journal of European Integration*, 40, 2, 177-192.

LEBOVIC, J. (2005). Donor Positioning: Development Assistance from the U.S., Japan, France, Germany, and Britain. *Political Research Quarterly*, 58, 1, 119-126.

MCGILLIVRAY, M. (2003). Modelling aid allocation: Issues, approaches and results. In *The United Nations University World Institute for Development Economics Research (UNU-WIDER)* [online]. no. 2003/49 [accessed on 4 March 2021]. Retrieved from: https://www.econstor.eu/bitstream/10419/52825/1/369117875.pdf.

NANCY, G., YONTCHEVA, B. (2006): Does Ngo Aid Go to the Poor? Empirical Evidence from Europe. In *IMF Working Paper* [online]. no. 06/39 [accessed on 12 March 2021]. Retrieved from: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=892930.

NEUMAYER, E. (2003). The Determinants of Aid Allocation by Regional Multilateral Development Banks and United Nations Agencies. *Journal of International Studies Quarterly,* 47, 1, 101-122.

NEUMAYER, E. (2005): Is the Allocation of Food Aid Free from Donor Interest Bias? *Journal of Development Studies*, 41, 3, 392-411.

OECD, 2015. Glossary. Development Co-operation Report 2015. Making Partnerships Effective Coalitions for Action. Retrieved from: https://www.oecd-ilibrary.org/docserver/dcr-2015-60-en.pdf?expires=1617195662&id=id&accname=guest&checksum=065C81FC3F84F79D4077BF90E9862C76. Accessed on 15 March 2021.

OECD, 2020. European Union institutions. Retrieved from: https://www.oecd-ilibrary.org/sites/c0ad1f0d-en/index.html?itemId=%2Fcontent%2Fcomponent%2F5e331623-en&_csp_=b14d4f60505d057b456dd1730d8fcea3&iteml-

GO=oecd&itemContentType=chapter&fbclid=IwAR1l5TNArEoNPc_E3qB7pYN-RjmQrWWiCAup9by6H4nX2ZY0yqOJDg_E7QF0#section-d1e13173. Accessed on 4 February 2021.

OECD, 2021. Aid (ODA) disbursements to countries and regions [DAC2a]. Retrieved from: https://stats.oecd.org/Index.aspx?datasetcode=TABLE2A#. Accessed on 8 March 2021.

PAXTON, P., KNACK, S. (2008). Individual and Country-Level Factors Affecting Support for Foreign Aid. In *Policy Research Working Paper*. [online]. no. 4714 [accessed on 4 March 2021]. Retrieved from: https://openknowledge.worldbank.org/bitstream/handle/10986/6984/WPS4714.pdf?sequence=1&isAllowed=y.

SELBERVIK, H., NYGAARD, K. (2006). Nordic Exceptionalism in Development Assistance? Aid Policies and the Major Donors: The Nordic Countries. In *Chr. Michelsen Institute* [online]. [accessed on 13 March 2021]. Retrieved from: https://www.cmi.no/publications/2371-nordic-exceptionalism-in-development-assistance.

STUBBS, T. H., KENTIKELENIS, A. E., KING, L. P. (2016). Catalyzing Aid? The IMF and Donor Behavior in Aid Allocation. *World Development,* 78, 511-528.

SZENT-IVÁNYI, B. (2012). Aid allocation of the emerging Central and Eastern European donors. *Journal of International Relations and Development*, 15, 1, 65-89.

TUMAN, J., AYOUB, A. (2004): The Determinants of Japanese Official Development Assistance in Africa: A Pooled Time Series Analysis. *International Interactions*, 30, 1, 43-57.

UNDP, 2021. Mean years of schooling (years). Retrieved from: http://hdr.undp.org/en/indicators/103006. Accessed on 28 February 2021.

WORLD BANK, 2021. Mortality Rate, Under-5 (Per 1,000 Live Births). Retrieved from: https://datacatalog.worldbank.org/mortality-rate-under-5-1000-live-births-7 Accessed on 18 February 2021.

ZENGIN, H., KORKMAZ, A. (2019): Determinants of Turkey's foreign aid behaviour. *New Perspectives on Turkey*, 61, 109-135.