PRINCIPAL DETERMINANTS OF TERRITORIAL ALLOCATION OF THE SLOVAK REPUBLIC'S BILATERAL DEVELOPMENT AID: PATH-DEPENDENT TRAJECTORY?

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Principal determinants of territorial allocation of the Slovak Republic's bilateral development aid: Path-dependent trajectory?

Slovakia started to provide bilateral official development assistance (ODA) in 2003 and became a fully-fledged member of the Development Assistance Committee of the OECD in 2013. This paper empirically examines the main determinants influencing the territorial selection and allocation of the Slovak Republic's ODA during the period 2003 – 2019. To reach the aim of this paper, we apply regression analysis with Probit and Tobit models and variables approximating recipient needs, donor interests as well as recipient merit. The results indicate that the allocation of Slovak aid is significantly determined by closer historical ties, geographical proximity, the existence of a Slovak embassy, quality of social policies and the size of population in the recipient countries, as well as the inertia in policy decision-making on aid allocation. This suggests that the Slovak Republic's ODA follows a path-dependent trajectory as most of its assistance traditionally flows to geographically closer countries with similar historical experiences from the communist and subsequent transition period, regardless of developmental needs of the poorest countries.

Key words: official development assistance, Slovak development aid, foreign aid allocation, Probit model, Tobit model, recipient need, donor interest

INTRODUCTION

The Slovak Republic started to implement a bilateral development cooperation with developing countries in 2003 and became a member of the OECD Development Assistance Committee (DAC), which brings together the world's largest aid donors, in 2013 (MFEA 2019). The Slovak Republic's development cooperation, its principles, basis and tools as well as the role of various actors involved in assistance implementation, is established in the 2007 Act on Development Cooperation, revised in 2015 (Act No. 392/2015). The Ministry of Foreign and European Affairs of the Slovak Republic (MFEA) is responsible for coordinating the national development cooperation and bilateral official development assistance (ODA), which is primarily implemented through the Slovak Agency for International Development Cooperation (SAIDC), created in 2007. According to the OECD (2021a), the Slovak development cooperation programme is based on its own transformative experience of building independent state institutions, developing a market economy, and expanding the principles of democracy. In addition, Slovak development cooperation is influenced by its successful process of integration into several international organisations, especially the EU and the OECD, and its relatively recent experience with receiving development aid from advanced economies.

This paper is motivated by the absence of relevant empirical literature studying the territorial distribution and determinants of Slovak development aid allocation. Szent-Iványi (2012) examines various factors that influence the allocation of Slovak

development aid, however, in the context of all four Visegrad countries. He emphasizes that it is important to have a close look at individual country characteristics. Dreher et al. (2011) compare the motives for providing development aid between "old" donors on the one hand, and "new" donors including the Slovak Republic on the other. They conclude that "new" donors care, on average, less for recipients' needs than traditional donors. The rest of the relevant literature, such as Vittek and Lightfoot (2009) and others, theoretically examine the Slovak development cooperation, focusing primarily on the historical development and the legal and institutional framework of the Slovak Republic's official development assistance. The absence of empirical literature on the determinants of Slovak aid allocation may be explained by the fact that Slovakia is a small donor with limited financial resources, and at the same time a relatively new donor of development aid. However, the Slovak Republic should no longer be seen as an "emerging" donor as the country has been providing bilateral official development assistance since 2003.

Even though a majority of Slovak official development assistance is provided multilaterally, especially through the European Union institutions, this paper focuses on a bilateral component of development aid provided by the Slovak Republic. The main goal of this paper is to examine the determinants of the Slovak Republic's bilateral development aid territorial selection and allocation. This paper also intends to assess whether the allocation of bilateral Slovak development assistance follows recipients' needs and merits rather than the donor's self-interests, or even path-dependent trajectory. We further analyse the consistency of the conceptual documents for Slovak development assistance, four consecutive medium-term Slovak development cooperation strategies (2003 – 2008, 2009 – 2013, 2014 – 2018 and 2019 – 2023), with the actual allocation of Slovak development aid in terms of territorial priorities.

TERRITORIAL FOCUS OF SLOVAK BILATERAL DEVELOPMENT AID

The Slovak Republic differs from large traditional donors not only in scarce financial resources and lack of human and logistic capacities, but also in terms of the limited number of recipient countries. According to the MFEA, the main criteria for selecting partner countries include the developmental needs of the recipients, political and economic interests of the Slovak Republic, international context and global challenges, existing activities and capacities of Slovak development actors, the existence of an embassy and other factors (MFEA 2019, p. 17). Developmental criteria for aid allocation incorporate development needs as well as performance of the recipient countries. The development needs consist of variables such as population size, income per capita, poverty rate, income distribution and level of social development, while a partner country's performance is evaluated by considering the progress in social, economic and political development, good governance and effectiveness of aid received (MFEA 2009, p. 12).

Territorial priorities of the Slovak Republic's development assistance are set out in four consecutive medium-term Slovak development cooperation strategies which have been adopted so far (2003 – 2008, 2009 – 2013, 2014 – 2018 and 2019 – 2023). These strategic documents for Slovak development policy distinguish between partner countries, formerly known as project countries, and programme countries with which Slovakia has a more intensive development cooperation and where more financial and human resources are allocated. An indicative list of pri-

ority countries based on the medium-term strategies is summarised in Table 1. Taking into account the limited capacity, logistics and financial resources of the Slovak development aid, there is a relatively high number of priority countries in the medium-term strategies, especially in the period 2019 – 2023. This is criticized by Ambrela – Platform for Development Organisations, according to which a high number of partner countries leads to geographical fragmentation and low effectiveness of Slovak bilateral aid (Sládková and Kaba 2021). The OECD Development Co-operation Peer Review of the Slovak Republic confirms that Slovak bilateral ODA is fragmented, consisting mainly of small grants spread across many short-term interventions (OECD 2019, p. 39).

Tab. 1. Territorial priorities of the Slovak Republic's bilateral ODA

Medium-Term Strategy	Territorial Priorities (Project/Partner Countries)	Programme Countries
2003 – 2008	Western Balkans (Albania, BiH, North Macedonia); Asia (Afghanistan, Kazakhstan, Kyrgyzstan, Mongolia, Tajikistan, Uzbekistan); East Africa (Kenya, Mozambique, Sudan)	Serbia and Montenegro*
2009 – 2013	Western Balkans (Albania, BiH, Montenegro, North Macedonia); Eastern Europe (Belarus, Moldova, Ukraine); Asia and Caucasus (Georgia, Kazakhstan, Kyrgyzstan, Mongolia, Tajikistan, Uzbekistan, Vietnam); East Africa (Ethiopia, Sudan)	Afghanistan, Kenya, Serbia
2014 – 2018	Western Balkans (Albania, BiH, Kosovo); Eastern Partnership (Belarus, Georgia, Ukraine); South Sudan	Afghanistan, Kenya, Moldova
2019 – 2023	Western Balkans (Albania, BiH, Montenegro, Kosovo, North Macedonia, Serbia); Eastern Partnership (Belarus, Georgia, Moldova, Ukraine); East Sub-Saharan Africa (Burundi, Ethiopia, Eritrea, South Sudan, Kenya, Rwanda, Somalia, Tanzania, Uganda); Middle East (Iraq, Jordan, Lebanon, Syria); Afghanistan	Kenya, Moldova, Georgia

Source: Authors' own elaboration, based on MFEA data (2003, 2009, 2013 and 2019).

Notes: *from 2007 Serbia and Montenegro represented two programme countries instead of one. BiH refers to Bosnia and Herzegovina. The first three medium-term strategies differentiated between project and programme countries, while the Medium-Term Strategy for Development Cooperation of the SR for 2019 – 2023 distinguishes between partner and programme countries.

Table 1 shows that the priority countries are in principle consistent and do not change significantly over time. The Western Balkans and the EU Eastern Partnership belong to the long-term territorial priorities of the Slovak Republic due to the support of stability and prosperity in the region as well as the European Union integration process (MFEA 2019). According to Vittek and Lightfoot (2009), an important factor of intensive Slovak development cooperation with these countries lies in the similar political and economic transition process. Szent-Iványi (2012) argues that the Visegrad Group countries allocate most of their bilateral aid primarily to partner countries in their immediate neighbourhood and countries "inherited" from the communist period. The Slovak Republic's historical experience, either

from the communist era or the transition period, and geographic proximity are therefore important factors influencing the allocation patterns of Slovak bilateral ODA. This is supported by the fact that the outermost regions without historical ties and closer economic, cultural or political relations, such as Latin America and the Caribbean and Far East Asia, are of peripheral interest to Slovak development cooperation (Fig. 1).

Broadly speaking, the top ten recipient countries of Slovak bilateral ODA are in line with its territorial priorities stipulated in the medium-term strategies. However, during the period from 2003 to 2008, there were three significant non-partner countries (Liberia, Iraq, and India) that received a relatively high volume of Slovak ODA (Tab. 2). This aid was mostly in the form of debt relief, in Liberia, and in-kind humanitarian assistance to countries with extraordinary needs. Between 2009 and 2013, the three largest recipients of Slovak bilateral ODA were the three programme countries. In the subsequent period, the largest recipients of Slovak ODA also corresponded with the indicative list of partner countries highlighted in a particular medium-term strategy. The current (2019) Slovak bilateral aid flows do not show significant changes towards less developed African countries, as mentioned in the medium-term strategy for 2019 – 2023. Over the entire period, only four countries (Afghanistan, Liberia, Sudan and South Sudan) out of the largest recipients of Slovak ODA are classified as the least developed countries. Both territorial priorities and a list of the largest recipient countries indicate that the distribution of Slovak bilateral aid follows a path-dependent trajectory, since aid flows seem to be affected more by historical and political preferences and experiences rather than current conditions or recipient needs. According to the OECD Development Cooperation Peer Review of the Slovak Republic, Slovakia should adapt its comparative advantage, drawing on its own transition experience, to the least developed countries, as most of them do not have similar political and economic transition trajectory (OECD 2019, p. 39).

Tab. 2. Largest recipient countries of Slovak aid disbursements (in million US$ at 2019 constant prices)

Rank	2003 – 2008	2009 – 2013	2014 – 2018	2019
1	Sudan (60.51)	Serbia (5.93)	Ukraine (8.29)	Kenya (2.58)
2	Liberia (21.80)	Kenya (5.47)	Kenya (8.00)	Turkey (1.90)
3	Serbia (13.79)*	Afghanistan (4.89)	Serbia (6.07)	Ukraine (1.42)
4	Afghanistan (10.22)	Ukraine (3.40)	Moldova (3.69)	Serbia (1.38)
5	Iraq (3.30)	BiH (2.40)	South Sudan (2.50)	Moldova (1.00)
6	BiH (3.10)	Georgia (1.93)	Georgia (2.34)	Lebanon (0.72)
7	India (2.81)	South Sudan (1.87)**	Afghanistan (2.26)	Georgia (0.62)
8	Mongolia (2.76)	Moldova (1.51)	Syria (2.04)	BiH (0.52)
9	Kenya (2.57)	Montenegro (1.20)	Iraq (1.60)	Albania (0.51)
10	Kyrgyzstan (2.47)	North Macedonia (0.99)	Kosovo (1.48)	Afghanistan (0.35)

Source: Authors' own elaboration, based on OECD (2021b) data.

Notes: *from 2007 Slovak ODA provided to Serbia and Montenegro is reported separately, Kosovo unilaterally declared independence from Serbia in 2008 and has become a separate recipient of Slovak aid since 2009, **prior to 2011, South Sudan was part of Sudan, since then Slovak ODA provided to both countries is reported separately.

During the period 2003 – 2019, Slovak bilateral ODA was primarily focused on Europe and East Africa. Figure 1 reports that the Slovak Republic's bilateral ODA is highly concentrated in a few regions such as the Western Balkans, Eastern Europe, and East Africa. Figure 1 also shows that the share of European recipient countries, especially Eastern European countries, in total bilateral aid allocable by country has substantially increased. Since 2014, the share of development assistance allocated to the Middle East has increased as a response to the crises in the region, particularly in terms of the Syrian Arab Republic. On the other hand, the share of aid allocated to West Africa, Far East Asia and South and Central Asia had a decreasing trend over the period 2003 – 2019. To sum up, Figure 1 indicates that most of the Slovak Republic's bilateral ODA is directed towards regions consisting of middle-income countries, which is not in line with one of its principal objectives to eradicate poverty. In addition, the territorial distribution of Slovak bilateral development aid is partly inconsistent with the European Consensus on Development from 2017, which says that the EU and its Member States will target development assistance particularly at the poorest countries and countries where the need for it is the greatest, and where the assistance can have the most positive impact (European Commission 2017).
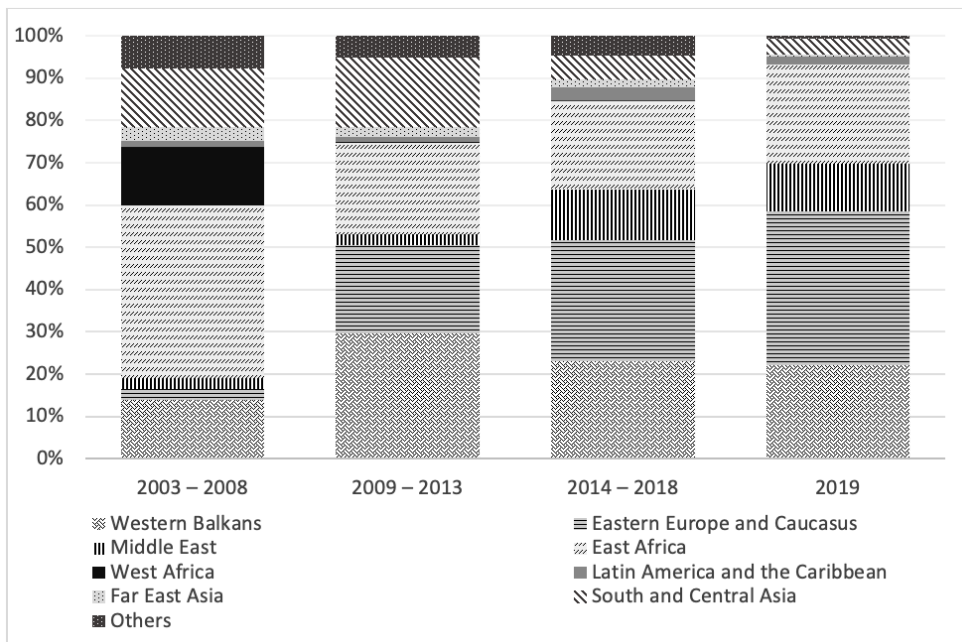

Fig. 1. Regional allocation of Slovak ODA (as % of total bilateral ODA allocable by recipient country)

Source: Authors' own elaboration, based on OECD (2021b) data.
Notes: List of non-zero Slovak ODA recipient countries belonging to the regions can be found in Appendix 4.

DATA AND METHODS

This paper builds on the recipient need-donor interest (RN-DI) approach to analyse the determinants of development aid allocation from the Slovak Republic. The recipient needs (RN) usually incorporate variables such as income per capita, poverty rate, infant mortality rate and other factors that reflect the recipient country's development and humanitarian necessities. The donor interests (DI) consist of economic, political, and strategic self-interests, arising from trade and investment relations with the recipient countries, former colonial or other historical ties, migration flows, or even common memberships in international organisations. We can also find a third category of determinants in the relevant literature – recipient merit (RM) – which examines whether the aid allocation is influenced by factors such as good governance, institutional quality, political stability, democratic regime and quality of economic policies in the recipient countries (Hoeffler and Outram 2011). Drawing from Burnside and Dollar's (2000) argument that aid is more effective in countries with good policies, the recipient merit indicators should capture the effectiveness, or in other words, expected developmental impact of foreign aid. There exist some other potential factors that may shape the allocation patterns of foreign aid, such as the geographical distance between the donor and recipient countries, population size of the recipients and a number of other variables. Following the more recent literature on foreign aid allocation (e. g., Berthélemy and Tichit 2004 and Harmáček et al. 2017), we group together the determinants of recipient need, donor interest as well as recipient merit categories into one single regression which is called "hybrid" model of aid allocation.

The aim of this paper is to empirically examine the determinants of territorial selection and allocation of the Slovak Republic's ODA to 139 developing countries and countries in transition during the period between 2003 and 2019 based on panel data. Overall, we dispose of over 23 variables, each providing for up to 2,334 observations. Each model specification employs between 1,951 and 2,104 observations. The list of variables (Appendix 1) and descriptive statistics (Appendix 2) can be found in the Appendixes. In the following part, we further elaborate on the data and model used in our analysis.

Data

The dependent variable in our analysis is ODA distributed by the Slovak Republic to developing and transitional countries. The data on development aid was retrieved from the OECD database as the total net disbursements in USD at 2019 constant prices. Since we focus on both selection and allocation processes, the ODA variable comes in two varieties. Firstly, as a binary variable *Aid* – either a country receives ODA (1), or a country does not receive ODA (0) from the Slovak Republic. The list of the countries that received non-zero Slovak bilateral ODA in at least one year over the period 2003 – 2019 can be found in Appendix 4. Secondly, the ODA takes a form of a censored variable, with part of the ODA allocation being equal to zero, with the rest representing non-zero amounts. In line with Lundsgaarde et al. (2010) or Harmáček et al. (2017), the amount of ODA provided by the Slovak Republic as a donor country is in the logarithmic form – *logODA*.[1]

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[1] Since the natural logarithm is undefined for a zero argument, every 0 ODA allocation is defined as 1 USD, giving us 0 in a logarithmic form (Dreher et al. 2009).

As was already mentioned, the allocation of ODA depends on the needs of the recipient countries as well as on the interests of donor countries. The former can be proxied by developmental attributes of recipient countries, ranging from socioeconomic to political conditions. One of the most widely used proxies for economic (under)development is GDP per capita. Despite its fragile foundations, GDP is still an immensely valuable indicator of socioeconomic underdevelopment and subsequently also of a need for development aid (Roemer and Gugerty 1997). Ex ante assumption is that more ODA would flow into countries with lower levels of economic development. The data on GDP per capita come from the World Bank's WDI database and are in 2019 international dollars (PPP). This variable is also employed in a logarithmic form (*logGDPpc*).

Since GDP per capita is a simplistic indicator of economic development, we also take into consideration other indicators trying to proxy for social aspects of development, such as life expectancy at birth (*logEXPE*), under-five mortality rate (*logMORT*) and mean years of schooling (*logEDU*). Data on life expectancy and under-five mortality rate come from the World Bank's WDI, while data on mean years of schooling are retrieved from the United Nations Development Programme. All indicators are employed in a logarithmic form. A lower score on life expectancy at birth and mean years of schooling is a prerequisite for a lower level of socioeconomic development, ipso facto stating a higher need for ODA. On the other hand, a higher under-five mortality rate indicates poorer social development and thus a higher need for foreign assistance. However, all three indicators may be viewed by donors as a measure of the quality or performance of the recipient country's social policy (Berthélemy and Tichit 2004). The relationship between foreign aid allocation and social development indicators is therefore ambiguous.

The next variable aiming to describe the recipient's needs is the size of a country's population (*logPOP*). Generally assumed, *ceteris paribus*, more populous countries are expected to be in a greater need for ODA than less populous countries. On the contrary, Neumayer (2003) argues that less populous countries may receive more aid for several reasons, such as decreasing marginal benefits of aid allocation as the population increases. Data on the total population are collected from the World Bank's WDI database and are used in the regression analysis in a logarithmic form.

Besides socioeconomic development and poverty levels, researchers tend not to disregard aspects of political and civil freedoms, quality of governance, as well as democratic system in a recipient country (Canavire-Bacarreza et al. 2005 and Harmáček et al. 2017). Variable approximating civil and political freedoms in recipient countries (*Freedom*) consists of an unweighted arithmetic average of political rights (*PR*) and civil liberties (*CL*) indicators provided by the Freedom House (2021). The quality of institutions and governance, on the other hand, is proxied by the World Bank's Worldwide Governance Indicators (*WGI*). *WGI* indicator represents an unweighted average of six individual governance indicators: Voice and Accountability, Political Stability and Absence of Violence/Terrorism, Government Effectiveness, Regulatory Quality, Rule of Law and Control of Corruption (Kaufmann et al. 2010).

Certain researchers also incorporate variables indicating whether a recipient country leans towards the democratic or autocratic rule, inquiring whether the donor country takes an interest in supporting democracy. As opposed to Harmáček et al. (2017), who employ Polity IV data on regime types, we decided to use Varieties

of Democracy indicators (V-Dem), which we believe to be more thorough. V-Dem (2021) distinguishes five principles of democracy: electoral, liberal, participatory, deliberative and egalitarian. For each of these five areas, V-Dem coders construct indicators which can be further disaggregated into dozens of lower-level components (see V-Dem codebook). We compose *V-Dem* indicator from unweighted averages of following components: electoral democracy index (*v2x_poly*), liberal democracy index (*v2x_libdem*), participatory democracy index (*v2x_partde*), deliberative democracy index (*v2x_delide*) and lastly egalitarian democracy index (*v2x_egalde*).

To cover the economic and political self-interests of the Slovak Republic as a donor country, we employ two variables. First, commercial interests are proxied by the total export of goods from Slovakia to each developing country. The data was retrieved from the International Trade Centre (ITC 2021) statistics and are used in the regression in a logarithmic form (*logEX*). A higher volume of exports to a particular recipient country ought to, in theory, augment commercial and economic interests in that country and thereby, in turn, affect a donor's decision to allocate more ODA there. Second, a dummy variable *Embassy* attempts to approximate the political interests of Slovakia in a recipient country. In line with the medium-term strategies, the existence of an embassy indicates logistical and technical capacities that may facilitate and enhance the implementation of Slovak development assistance (MFEA 2019). Therefore, we can expect that more aid flows to the recipient countries where there are Slovak embassies. This dummy variable takes the value of one for those years in which Slovakia had a representative office (embassy) in a recipient country, otherwise zero. All details regarding Slovak embassies abroad are published by the Ministry of Foreign and European Affairs of the Slovak Republic.

Subsequently, drawing from the knowledge of economic geography, "gravitational" effects always play a role when it comes to international economic decisions (e.g., Krugman 1998). Economic exchange, including ODA, is assumed to decrease with the augmenting geographic distance (Collier and Dollar 2004). A variable explaining the distance (*Dist*) between Bratislava (the capital of Slovakia) and the capital of a recipient country was taken from Distance Calculator (2021). Historical ties can also be regarded as an important factor influencing the development aid policy. In line with Harmáček et al. (2017), we construct a dummy variable *Comec*, which equals one if a recipient country was a member, associate member, country with cooperation agreement or observer of the Council for Mutual Economic Assistance (COMECON) for a certain period of time, otherwise the value of the dummy variable equals zero. It is not implausible to assume that historical ties stemming from Slovakia's communist past might potentially transmit into a path-dependent trajectory and eventually influence the current selection and allocation of Slovak bilateral ODA. The variable *Comec* was created based on Young (1985). Similarly, if there exists path-dependency, there might exist also a path-creation and Slovakia's attempt to contribute to the fight against global poverty. In this context, we also employ a dummy variable *LDC* indicating whether a recipient country belongs to one of the world's least developed countries. This dummy takes a value of one for those countries which are on the United Nations list of least developed countries, otherwise zero.

To examine a "snowball effect" in selection and allocation of Slovak development aid, we employ a variable describing the total ODA (*logODAtot*) being allo-

cated into a particular country. The data are obtained from OECD statistics in 2019 constant prices and come into regression in a logarithmic form. It will allow us to determine whether Slovakia tends to allocate more aid to countries which are already being helped by the international community. Harrigan and Wang (2011), for instance, argue that the "snowball effect" is predicated on the already established institutions of aid implementation and validated ways of allocating ODA into developing countries, which makes it simpler for other donor countries to follow. Lastly, all explanatory variables are in one-year lag except for the dummy variables, taking into consideration the progression of the decision to provide development aid. According to Szent-Iványi (2012) and Roodman (2007), this allows us to tackle the endogeneity problem. By lagging ODA by one year and subsequently regressing it on the *logODA*, we also aim to access the allocation inertia.

Model

Initially, there were attempts to estimate two separate models, one for the recipient's needs and one for donor's interests, using cross-sectional data, and employing simple linear regression models (McKinlay and Little 1979, Alesina and Dollar 2000 and McGillivray 2003). This approach was later criticised due to its inaccuracy when using binary and censored dependent variables (Bowles 1987). Most researchers shifted afterwards to alternative approaches, combining both recipient needs and donor interests into one model, giving rise to the so called "hybrid" models (e. g., Berthélemy and Tichit 2004, Canavire-Bacarreza et al. 2005, Dreher et al. 2009 and Harmáček et al. 2017).

There are three main methods of how to construct such hybrid models (e. g., Canavire-Bacarreza at al. 2005 and Berthélemy 2006). The first approach employs, in the first step, a non-linear Probit or Logit model to evaluate the probabilities of selection factors. In the second step, it uses a simple OLS regression to examine the factors' significance in the case of non-zero allocations (Barthel et al. 2014). The second approach employs Tobit for censored variables (Dreher et al. 2009, Doucouliagos and Manning 2009 and Dreher et al. 2011). The last group of models uses the Heckman sample selection model (Heckman 1976 and 1979). The two-step model first employs the Probit model to analyse factors of binary variables, computing "inverse Mills' ratio", which is subsequently inputted in the second step as an independent variable in the so-called allocation equation. The allocation equation, being usually estimated by a simple OLS regression or Maximum probability estimation, aims to explain the ODA allocation amounts (Berthélemy 2006 and Lundsgaarde et al. 2010). The Heckman model, however, requires the presence of a variable, which has a significant influence on the selection process, but at the same time has little impact on the decisions regarding the allocation. Barthel et al. (2014, p. 14) argue that "none of the variables affecting aid allocation is likely to fulfil this restriction". This makes the Heckman model relatively difficult for us to use.

In line with McGillivray (2003), Berthélemy and Tichit (2004), Canavire-Bacarreza et al. (2005), Dreher et al. (2009) and Harmáček et al. (2017) we opt for the hybrid model, combining both the donor interests and recipient needs into one equation, using panel data. Panel data are more suitable when using models with binary and censored variables (Tobit or Heckman models). Furthermore, panel data significantly decrease the group heteroskedasticity and allow us to reduce random-

ness in selectin g multiple time periods for each variable (Harrigan and Wang 2011). For the selection criteria, we employ a non-linear Probit model for binary response, assessing probabilities of whether a country will be selected for Slovakia's ODA. In this model, we make use of the binary Aid variable. The binary Aid dependent variable takes two values, 0 and 1:

$$y_i = \begin{cases} 0 \; if \; no \\ 1 \; if \; yes \end{cases} \tag{1}$$

$country_i = 0$ country did not receive ODA from Slovakia, $country_i = 1$ country did receive ODA from Slovakia.

The Probit model estimates the probability of $y_i = 1$ as a non-linear function G of the independent variables:

$$P \; (y_i = 1|x) = G \; (\beta_0 + \beta_1 x_1 + \ldots + \beta_k x_k) = G \; (\beta_0 + x'\beta), \tag{2}$$

where $G(z)$ represents a non-linear function, with values of $x'\beta$ between 0 and 1. The Probit model uses the cumulative density function of the normal distribution ϕ:[2]

$$P(y_i = 1|x) = \phi(x'\beta) = \int_{-\infty}^{x'\beta} \phi(z)dz, \tag{3}$$

where the predicted probabilities are limited between 0 and 1. The model β coefficients are estimated by maximizing the log-likelihood function[3]. An increase in the independent variable can either increase or decrease the probability that the dependent variable equals 1 or in other words that an increase in x makes the outcome of 1 more or less likely (Wooldrige 2012, pp. 584 – 596).

For the determinants regarding the allocation decision behind Slovak ODA, which is by definition a censored dependent variable, we opt for the Tobit model, making use of the *logODA* variable. The censored dependent variable, in our case, takes on two values:

$$y_i = \begin{cases} 0 \; if \; y_i = 0 \\ y^* \; if \; y_i > 0 \end{cases} \tag{4}$$

$y_i = 0$ country receives no ODA allocation from Slovakia, $y_i > 0$ country receives non-zero ODA allocation from Slovakia.

The Tobit model essentially combines simple Probit model for discrete decisions of whether y_i equals zero or not:

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[2] Logit model uses the cumulative distribution function for a standard logistic random variable

$P(y_i = 1) = \frac{\exp(x'\beta)}{(1 + \exp(x'\beta))}.$ For all the practical purposes, Logit and Probit models deliver similar results.

[3] The Probit model coefficients are obtained by maximizing the log-likelihood function (if the outcome $y_i = 1$, the predicted probability $P(y_i = 1)$ is maximized):

$max \sum_{i=1}^{n} (y_i \log P(y_i = 1) + (1 - y_i) * logP(y_i = 0)).$

[4] Non-zero allocation of ODA by the Slovak Republic concerns only 24% countries.

$$\text{P}\,(y_i > 0|x) = \phi\,(x'\beta), \tag{5}$$

with truncated regression model for the continuous decision for the quantity of $(y|y > 0, x)$:

$$E\big((y|y) > 0, x\big) = x'\beta + \sigma\lambda\left(\frac{x'\beta}{\sigma}\right), \tag{6}$$

where σ represents the inverse Mills' ratio evaluated at $\frac{x'\beta}{\sigma}$ (Wooldrige 2012, p. 598).[5]

In the case of both models, Probit assessing the selection and Tobit assessing the allocation processes, we use random-effect models with robust standard-errors. Also, since the random-effect models are calculated using quadrature, which is an approximation whose accuracy depends on the number of integration points used, usually 8 by defaults, we use the "quadchk" command in Stata to determine if changing the number of integration points affects the results. Ultimately, we decided to set the number of integration points at 20. We also opt for adaptive quadrature due to its flexibility and robustness.

In Tab. 3, we summarise the results of the Probit and Tobit models in their basic forms. The Probit model focuses on the explanation of the selection determinants:

$$Aid_{i,t} = \alpha + \beta_1 logEX_{i,t-1} + \beta_2 Comec_i + \beta_3 LDC_i + \beta_4 Embassy_i + \beta_5 Dist_i + \beta_6 logGDPpc_{i,t-1} + \beta_7 logPOP_{i,t-1} + \beta_8 logEXPECT_{i,t-1} + \beta_9 FREEDOM_{i,t-1} + \varepsilon_{i,t} \tag{7}$$

and the Tobit model focuses on the determinants of allocation processes:

$$logODA_{i,t} = \alpha + \beta_1 logEX_{i,t-1} + \beta_2 Comec_i + \beta_3 LDC_i + \beta_4 Embassy_i + \beta_5 Dist_i + \beta_6 logGDPpc_{i,t-1} + \beta_7 logPOP_{i,t-1} + \beta_8 logEXPECT_{i,t-1} + \beta_9 FREEDOM_{i,t-1} + \varepsilon_{i,t} \tag{8}$$

Extended version of the model with additional variables can be found in Appendix 3.
Following the presentation of our results in Table 3, we also examine the marginal effects of the variables from our model in their basic forms on probability of $y_i = 1$ (Wooldrige 2012). Extending (3), we can describe marginals effects in the Probit model as:

$$\frac{\partial P\big(y_i = (1|x)\big)}{\partial x_j} = \phi\left(\frac{x'\beta}{\sigma}\right) * \beta_j \tag{9}$$

and in the Tobit models extending (6) as

$$\frac{\partial E(y_i)}{\partial x_j} = \beta_j \phi\left(\frac{x'\beta}{\sigma}\right) \tag{10}$$

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[5] The inverse Mills' ratio is the ratio between the standard normal probability density function and standard normal cumulative distribution function.

We estimate both average marginal effects (AME) and marginal effects at the mean (MEM).[6]

RESULTS AND DISCUSSION

The results of the regression analysis examining the selection and allocation aspects of the Slovak Republic's bilateral ODA can be found in Tab. 3. The most statistically significant determinants in each model, ceteris paribus, turn out to be, on a consistent basis, historical relations (*Comec*), geographical distance (*Dist*) and population size of the recipient countries (*logPOP*). These variables indicate high levels of significance regardless of the variation of Probit and Tobit model we use, even within the extended versions (Appendix 3). Even though Slovakia has no colonial history, the path-dependent trajectory, influenced by the communist past and subsequent transition experience, seems to be crucial in shaping the allocation patterns of Slovak bilateral ODA. Looking at AME in Tab. 4, historical association of a recipient country with the Comecon increases the probability of selection by 25.4% and subsequent non-zero allocation by over 130%. There is also some empirical evidence that geographically closer recipient countries tend to be selected for receiving more aid from Slovakia as the coefficient on distance is negative and statistically significant in all specifications (Tab. 3). This is supported by Szent-Iványi (2012) who finds that the main determining factors of the Visegrad countries' aid allocation are geographic proximity and historical ties. Similarly, Opršal et al. (2017) find that the Czech Republic tends to provide more aid to recipient countries which are geographically closer and with which it has closer historical ties. Furthermore, Opršal et al. (2021) argue that Czechia and Poland prefer to allocate aid to post-Soviet recipient countries, approximating the geopolitical concerns and historical relations, and countries situated in a closer proximity. In terms of the variables approximating donor's self-interests, it seems that Slovakia behaves in a similar way as other Central and Eastern European donors, especially the Czech Republic.

Regarding the recipient countries' characteristics, the results of the regression analysis indicate that more populous countries are likely to receive more ODA from the Slovak Republic. A 10% increase in the population size raises the probability that a recipient country will be selected for Slovak ODA by approximately 6.5% and the non-zero allocation by over 50% (Tab. 4). Therefore, it seems that Slovakia perceives more populous countries as those that are in a greater need for development assistance. This is in line with the Medium-Term Strategy for 2009-2013 stating that population size is an indicator of development needs when deciding on the Slovak aid allocation (MFEA 2009, p. 12). However, we obtained somewhat ambiguous results in terms of the determinants approximating recipient needs or, in other words, social aspects of a recipient country's development. The variable life expectancy at birth (*logEXPE*) has statistically significant positive impact on ODA selection and allocation probabilities (Tab. 3). This suggests that Slovakia tends to provide more aid to the countries with higher life expectancy and thus better human development outcomes. On the other hand, the variables under-five mortality rate (*logMORT*) and mean years of schooling (*logEDU*) have no statistically

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[6] The average marginal effects are calculated for each observation and then averaged across all observations $\phi (x'\beta) * \beta_j$ and marginal effect at the mean are calculated at the mean value of x ($\bar{x}$).

significant impact on Slovak ODA (Appendix 3). Following Berthélemy and Tich-it's (2004) argumentation, socioeconomic variables can be viewed by donors not only as a measure of need but also as the indicators of a recipient country's social policy performance. This implies that Slovakia prefers to allocate higher volume of ODA to developing countries that perform better in terms of social policy indicators. Similar results are obtained by Harmáček et al. (2017) and Opršal et al. (2017) who find that volume of the neighbouring Czech Republic's aid increases with higher level of social development in recipient countries.

Tab. 3. Determinants of selection and allocation of the Slovak Republic's ODA

	Probit 1	Tobit 1	Probit 2	Tobit 2	Probit 3	Tobit 3	Tobit 4
$logEX_{t-1}$	-0.044	-0.189	-0.044	-0.195	-0.043	-0.188	-0.120
	(-0.80)	(-1.41)	(-0.82)	(-1.47)	(-0.79)	(-1.41)	(-0.98)
Comec	1.716***	5.873***	1.743***	5.943***	1.707***	5.853***	4.141***
	(6.72)	(6.36)	(6.68)	(6.36)	(6.68)	(6.34)	(5.92)
LDC	0.689*	1.926*	0.688	1.891*	0.674	1.899*	1.625*
	(1.98)	(2.00)	(1.94)	(1.98)	(1.94)	(1.97)	(2.17)
Embassy	0.697*	1.930**	0.673*	1.836**	0.708*	1.937**	1.295*
	(2.34)	(3.11)	(2.19)	(2.93)	(2.36)	(3.12)	(2.35)
Dist	-0.0002***	-0.0005***	-0.0002***	-0.0005***	-0.0002***	-0.0005***	-0.0004***
	(-4.41)	(-4.06)	(-4.13)	(-4.12)	(-4.27)	(-4.03)	(-3.97)
$logGDPpc_{t-1}$	-0.000002	-0.00002	-0.000005	-0.00003	0.0000003	-0.00002	-0.00002
	(-0.10)	(-0.36)	(-0.30)	(-0.58)	(0.02)	(-0.30)	(-0.38)
$logPOP_{t-1}$	0.584***	2.547***	0.618***	2.657***	0.572***	2.529***	2.004***
	(3.64)	(4.43)	(3.59)	(4.50)	(3.52)	(4.40)	(4.42)
$logEXPE_{t-1}$	6.582*	20.25***	6.067*	18.45**	6.526*	20.12***	16.31**
	(2.44)	(3.34)	(2.30)	(3.02)	(2.43)	(3.32)	(3.16)
$Freedom_{t-1}$	-0.062	-0.171			-0.057	-0.164	-0.160
	(-0.97)	(-0.88)			(-0.90)	(-0.85)	(-0.99)
WGI_{t-1}			0.268	0.815			
			(1.18)	(1.30)			
$logODAtot_t$					0.043	0.068	
					(0.72)	(0.72)	
$logODA_{t-1}$							0.644***
							(9.85)
Constant	-16.56**	-55.72***	-15.94**	-53.32***	-16.77**	-55.97***	-45.79***
	(-3.17)	(-4.81)	(-3.12)	(-4.61)	(-3.21)	(-4.83)	(-4.63)
lnsig2u	-0.123		-0.091		-0.124		
	(-0.50)		(-0.37)		(-0.51)		
sigma_u		3.386***		3.411***		3.384***	2.381***
		(9.93)		(9.95)		(9.93)	(8.53)
sigma_e		3.726***		3.708***		3.726***	3.577***
		(27.25)		(27.34)		(27.25)	(27.22)
Obs.	2,101	2,101	2,104	2,104	2,101	2,101	2,100
Countries	125	125	125	125	125	125	125
Wald Chi^2	133.3	132.3	127.6	131.5	136.7	133.0	282.2

Source: Authors' own elaboration.

Notes: Robust standard errors, *t* statistics in parentheses, ***$p < 0.01$, **$p < 0.05$, *$p < 0.1$.

Another variable approximating the recipient needs is the level of economic development proxied by GDP per capita. Surprisingly, Table 3 shows that *logGDPpc* has no statistically significant impact as compared to other studies in this field (Neumayer 2003, Berthelémy and Tichit 2004 and Harmáček et al. 2017). Opršal et al. (2017) find that the Czech Republic allocates more aid to recipients

with lower levels of economic development. In comparative terms, the results indicate that Slovakia cares less about the recipient's needs than Czechia. Unexpected results regarding the recipient's needs variables, such as GDP per capita, life expectancy, under-five mortality rate and mean years of schooling, are in line with Dreher et al. (2011) who find that "new" donors, including Slovakia, are not as concerned with recipient's needs as traditional "old" donors. Another explanation might be the combination of the path-dependent orientation of Slovak ODA towards the former Comecon countries, which on average belong to the middle-income countries, and a relative significance of *LDC* dummy variable. Average marginal effects in Table 4 indicate that the status of the least developed countries augments the probability of the Slovak Republic's ODA by 9%. This might result into the GDP per capita variable not being significant in either of the two directions.

Next, it is not entirely implausible to assume that Slovak ODA reflects the country's political preferences at least to a certain extent, especially when one looks at the variable describing the presence of Slovak embassies in the recipient countries as a proxy for donor's political interests. Table 3 reports that the presence of the Slovak embassy in the recipient country is a statistically significant determinant of Slovak aid selection and allocation, which is consistent with the medium-term strategies (for instance MFEA 2019). However, as already mentioned, the existence of an embassy in partner countries indicates logistical, human and technical capacities that may enhance the implementation of Slovak ODA. Therefore, the *Embassy* dummy variable may reflect political interests and, at the same time, logistical and practical criteria. Other than that, the economic donor interests of the Slovak Republic do not seem to be reflected in either the selection, or the allocation of Slovak ODA. Based on our results, Table 3 shows that the distribution of development assistance is not affected by the flows of Slovak exports (*logEX*) whatsoever. The opposite results are obtained for the Czech Republic. Opršal et al. (2017) assert that Czechia tends to provide more ODA to those recipients to which it exports more. On the other hand, imports from the former Comecon economies, being concentrated on the exploitation of natural resources and primary commodities, might be potentially significant and revert the absence of exports as a significant variable in determining donor's interests in the case of Slovakia, however, we leave this for further research.

The recipient merit indicators, such as civil and political freedoms, quality of governance and type of political regime in the recipient countries, appear to be significant determinants in neither of our models. However, when disaggregating *Freedom* variable into lower-level components, such as political rights and civil liberties, there is some evidence that Slovakia tends to provide more aid to the recipient countries with a higher degree of political rights (*PR*), even though the civil liberties indicator (*CL*) remains statistically insignificant (Appendix 3). It therefore seems that Slovakia disregards indicators of good governance, institutional quality and political regime in the recipient countries when deciding on aid selection and allocation. As compared to the Czech Republic, Opršal et al. (2017) and Opršal et al. (2021) find that Czechia prefers in its aid allocation more democratic recipient countries with a higher degree of freedom. However, they argue that the Czech Republic tends to provide more aid to the recipient countries with poorer quality of institutions (Opršal et al. 2017), which leads to ambiguous results in terms of the recipient merit indicators.

Tab. 4. Average marginal effects and marginal effects at the mean

	Probit AME	Tobit AME	Probit MEM	Tobit MEM
$logEX_{t-1}$	-0.0029	-0.0307	-0.0037	-0.0219
	(-0.39)	(-0.97)	(-0.39)	(-0.97)
Comec	0.254***	1.303***	0.304***	1.135***
	(5.30)	(4.78)	(5.48)	(4.24)
LDC	0.0921*	0.437*	0.127*	0.326
	(2.39)	(2.02)	(2.24)	(1.94)
Embassy	0.0962*	0.360*	0.122*	0.276*
	(2.36)	(2.23)	(2.30)	(2.06)
Dist	-0.00002***	-0.000097***	-0.000021***	-0.000069***
	(-4.05)	(-3.79)	(-4.01)	(-3.90)
$logGDPpc_{t-1}$	-0.0000002	-0.000004	-0.0000003	-0.000003
	(-0.12)	(-0.30)	(-0.12)	(-0.30)
$logPOP_{t-1}$	0.0654***	0.513***	0.0825***	0.366***
	(3.41)	(4.17)	(3.58)	(4.41)
$logEXPE_{t-1}$	0.855**	4.219**	1.078**	3.006**
	(3.07)	(3.11)	(3.08)	(3.09)
$Freedom_{t-1}$	-0.0076	-0.0384	-0.0096	-0.0274
	(-1.02)	(-0.91)	(-1.01)	(-0.92)
$logODAtot_t$	0.0077	0.0230	0.0097	0.0164
	(1.02)	(0.99)	(1.01)	(0.99)
$logODA_{t-1}$	0.0334***	0.168***	0.0421***	0.120***
	(8.07)	(9.05)	(6.99)	(7.44)
Obs.	2,100	2,100	2,100	2,100

Source: Authors' own elaboration.

Notes: Robust standard errors, *t* statistics in parentheses, ***$p < 0.01$, **$p < 0.05$, *$p < 0.1$.

Furthermore, we did not manage to identify the "snowball effect" either. We can conclude that the Slovak Republic's development assistance does not follow the developmental tendencies of the international community, since Slovakia does not incline to provide ODA to the countries which already receive large amounts of aid from other official donors. This may be explained by the fact that a large part of Slovak ODA traditionally flows to the Western Balkan and Eastern European countries, and not to the least developed countries. On the other hand, similarly to the findings presented by Harmáček et al. (2017), the lagged variable of Slovak ODA (*logODA*) indicates significant inertia in aid allocation patterns of the Slovak Republic, which follows a certain logic as development aid requires a certain degree of institutional continuity. This is supported by the long-term territorial priorities of the Slovak development assistance which have not changed significantly over the period 2003 – 2019. In addition to that, statistically significant inertia in policy decision-making on aid allocation supports the idea of a path-dependent trajectory of Slovak development cooperation.

CONCLUSION

In this paper, we dealt with a bilateral component of development assistance provided by Slovakia between 2003 and 2019 from a territorial point of view. The aim of the paper was to empirically examine the principal determinants behind territorial selection and allocation of the Slovak Republic's aid. We further analysed the consistency of the conceptual documents for Slovak development assistance,

four consecutive medium-term Slovak development cooperation strategies, with the real distribution of Slovak development aid in terms of the territorial priorities. In general, the largest recipient countries of Slovak aid correspond with the indicative list of partner countries highlighted by the medium-term strategies. Territorial priorities of the Slovak Republic's ODA do not change significantly over time and most of the development assistance is traditionally concentrated in the regions consisting of middle-income countries, such as the Western Balkans, Eastern Europe, and East Africa (Kenya).

The principal and, at the same time, statistically significant determinants of the territorial selection and allocation of the Slovak Republic's ODA in each model specifications are historical relations, geographical distance between Slovakia and a recipient country, the existence of a Slovak embassy, population size and the quality of social policies in the recipient countries. To summarize the results of regression analysis, we highlight the most relevant findings. First, Slovakia tends to allocate more ODA to the recipient countries with which it has closer historical ties from the communist era and similar experiences from the subsequent transitional period. Second, an important determinant when deciding where to allocate aid is an existence of a Slovak embassy in the given country, reflecting the political interests as well as logistical, human and technical capacities. Third, Slovakia tends to provide more aid to the recipient countries with better human development outcomes and therefore with better social policy performance. Fourth, the Slovak Republic prefers recipient countries in its relative geographic proximity. Fifth, more populous countries are likely to receive more ODA from the Slovak Republic. Finally, the focus on recipient needs seems to be weak since the variables approximating the level of recipient countries' socioeconomic development are statistically insignificant.

In line with the territorial priorities stated in the medium-term strategies, actual aid disbursements, as well as statistical significance of the variables such as historical relations, geographical proximity and inertia in policy decision-making on aid allocation, we conclude that the Slovak Republic's bilateral development aid follows rather a path-dependent trajectory or, in other words, traditional allocation patterns. However, in our opinion, Slovakia should reassess not only its territorial priorities stated in the medium-term strategies, but also the actual Slovak development aid disbursements in favour of less developed countries, especially African states, to follow the European Consensus on Development from 2017 and other recommendations, such as those mentioned in the OECD peer review of the Slovak Republic.

To the best of our knowledge, this is the first study that holistically examines determinants of the Slovak Republic's development aid selection and allocation. In this paper, we did not deal with other aspects of Slovakia's bilateral development assistance, such as sectoral priorities or the effectiveness of Slovak aid. For future research, other potential determinants of the Slovak Republic's development aid selection and allocation, such as geopolitical and security concerns, other donor economic interests (e.g., imports from recipient countries), cultural or environmental issues of foreign assistance, may be examined.

APPENDIXES

Appendix 1. Description of variables and data sources

Variable	Description	Source
Aid	Official development assistance provided by the Slovak Republic in a binary form. Aid equals 1 if Slovakia provided non-zero ODA to a particular country in a given year, otherwise 0.	OECD (2021b)
ODA	Total net ODA disbursements from Slovakia to a particular recipient country in constant 2019 prices, in millions of US dollars.	OECD (2021b)
ODAtot	Official development assistance by all donor countries combined in constant 2019 prices, in millions of US dollars.	OECD (2021b)
EX	Total export of goods from Slovakia to a recipient country in thousands of US dollars.	ITC (2021)
Comec	Dummy variable equals 1 if a recipient country, including successor states, was member, associate member, country with cooperation agreement or observer of the Council for Mutual Economic Assistance for a certain period of time (COMECON), otherwise 0.	Young (1985)
LDC	Dummy variable for those recipients classified as the least developed countries. LDC variable equals 1 if a country is on the United Nations list of least developed countries, otherwise 0.	UNCTAD
Embassy	The Slovak Republic's representative office (embassy) in a recipient country as a dummy variable. Embassy equals 1 if Slovakia had embassy in the recipient country in a particular year, otherwise 0.	MFEA (2019)
Dist	Distance between Bratislava and the capital city of a recipient country, in kilometres.	Distancece Calculator (2021)
GDP	Gross domestic product per capita in constant 2017 international dollars (PPP).	World Bank (2021)
POP	Total population in thousands, based on de facto definition.	World Bank (2021)
EXPE	Life expectancy at birth in a recipient country, total in years.	World Bank (2021)
MORT	Under-five mortality rate per 1,000 live births.	World Bank (2021)
EDU	Mean years of schooling (in years).	UNDP (2021)
Freedom	Unweighted average of Political rights (PR) and Civil liberties (CL) indicators from the Freedom House. Values of the Index of Freedom, PR and CL range from 1 (highest) to 7 (lowest) degree of freedom.	Freedom House (2021)
WGI	Unweighted average of six Worldwide Governance Indicators: Voice and Accountability, Political Stability and Absence of Violence/ Terrorism, Government Effectiveness, Regulatory Quality, Rule of Law and Control of Corruption. Values of the indicator range from -2,5 (weak) to 2,5 (strong) governance performance.	World Bank (2022)
V-Dem	Unweighted average of V-Dem indicators: Electoral democracy index (v2x_poly), Liberal democracy index (v2x_libdem), Participatory democracy index (v2x_partde), Deliberative democracy index (v2x_delide) and Egalitarian democracy index (v2x_egalde).	V-Dem (2021)

Source: Authors' own elaboration.

Appendix 2. Descriptive statistics

Variables	Obs.	Mean	Std. Dev.	Min.	Max.
Aid	2,334	0.238	0.426	0	1
logODA	2,334	1.187	2.151	0	7.362
logODAtot	2,334	8.173	1.619	0	10.41
logEX	2,334	5.208	2.525	0	9.326
Comec	2,334	0.210	0.408	0	1
LDC	2,334	0.332	0.471	0	1
Embassy	2,334	0.213	0.409	0	1
Dist	2,334	6,801	3,718	273	16,816
logGDPpc	2,187	3.757	0.385	2.855	4.615
logPOP	2,327	6.778	0.952	3.982	9.144
logEXPE	2,249	1.819	0.0579	1.617	1.904
logMORT	2,323	1.563	0.370	0.398	2.335
logEDU	2,219	0.781	0.214	0.0792	1.111
Freedom	2,331	3.923	1.799	1	7
PR	2,331	4.011	2.004	1	7
CL	2,331	3.836	1.680	0	7
WGI	2,334	-0.497	0.619	-2.449	1.287
VDem	2,096	1.669	0.901	0.234	4.167
v2x_poly	2,096	0.447	0.211	0.067	0.912
v2x_libdem	2,096	0.313	0.201	0.005	0.861
v2x_partde	2,096	0.273	0.149	0.008	0.701
v2x_delide	2,096	0.332	0.199	0.009	0.868
v2x_egalde	2,334	0.273	0.179	0	0.828

Source: Authors' own elaboration.

Appendix 3. Additional determinants of the Slovak Republic's aid allocation

Variables	Probit_add	Tobit_add	Probit_FH	Tobit_FH	Probit_VDEM	Tobit_VDEM
logEX$_{t-1}$	-0.0518	-0.213	-0.0494	-0.211	-0.0574	-0.227
	(-0.87)	(-1.46)	(-0.89)	(-1.58)	(-1.01)	(-1.70)
Comec	1.525***	5.332***	1.733***	5.901***	1.720***	5.809***
	(5.82)	(5.80)	(6.79)	(6.32)	(6.54)	(6.28)
LDC	0.970*	2.853**	0.657	1.806	0.717*	2.048*
	(2.44)	(2.66)	(1.88)	(1.86)	(2.04)	(2.12)
Embassy	0.582	1.739**	0.721*	2.025**	0.667*	1.760**
	(1.88)	(2.69)	(2.43)	(3.24)	(2.09)	(2.80)
Dist	-0.00014***	-0.00051***	-0.00015***	-0.00052***	-0.00016***	-0.00053***
	(-4.22)	(-4.02)	(-4.32)	(-4.08)	(-4.15)	(-4.00)
logGDPpc$_{t-1}$	-0.000017	-0.00006	-0.000004	-0.00003	0.000002	-0.000007
	(-0.99)	(-1.03)	(-0.25)	(-0.49)	(0.11)	(-0.13)
logPOP$_{t-1}$	0.663***	2.728***	0.568***	2.488***	0.581**	2.604***
	(3.94)	(4.70)	(3.54)	(4.30)	(3.07)	(4.08)
logEXPE$_{t-1}$	0.159	5.182	6.609*	20.03***	6.415*	19.31**
	(0.05)	(0.56)	(2.41)	(3.30)	(2.34)	(3.18)
logMORT$_{t-1}$	-1.116	-2.239				
	(-1.86)	(-1.33)				

Continuation of Appendix 3

$logEDU_{t-1}$	0.979	3.715				
	(1.12)	(1.45)				
$Freedom_{t-1}$	-0.0365	-0.110				
	(-0.57)	(-0.56)				
PR_{t-1}			-0.139[*]	-0.427[*]		
			(-1.97)	(-2.10)		
CL_{t-1}			0.105	0.335		
			(1.48)	(1.40)		
$v2x\_poly_{t-1}$					-0.320	-1.596
					(-0.16)	(-0.29)
$v2x\_libdem_{t-1}$					-0.307	-1.880
					(-0.14)	(-0.31)
$v2x\_partde_{t-1}$					3.357	9.525
					(1.39)	(1.35)
$v2x\_delide_{t-1}$					-1.395	-4.602
					(-1.03)	(-1.21)
$v2x\_egalde_{t-1}$					0.912	6.079
					(0.42)	(1.00)
Constant	-4.444	-29.02	-16.52[**]	-54.94[***]	-16.84[**]	-56.42[***]
	(-0.67)	(-1.56)	(-3.12)	(-4.73)	(-3.22)	(-4.85)
lnsig2u	-0.255		-0.0883		-0.145	
	(-0.98)		(-0.36)		(-0.57)	
sigma_u		3.234[***]		3.425[***]		3.352[***]
		(9.70)		(9.93)		(9.77)
sigma_e		3.771[***]		3.714[***]		3.698[***]
		(26.85)		(27.25)		(27.34)
Obs.	2,065	2,065	2,101	2,101	1,951	1,951
Countries	124	124	125	125	116	116
Wald Chi²	130.8	140.8	133.1	133.2	119.0	124.9

Source: Authors' own elaboration.
Notes: Robust standard errors, t statistics in parentheses, [***] $p < 0.01$, [**] $p < 0.05$, [*] $p < 0.1$.

Appendix 4. Recipient countries of non-zero Slovak bilateral ODA over the period 2003 – 2019 by regions

Region	Countries
Western Balkans	Albania, Bosnia and Herzegovina, Croatia, Kosovo, Montenegro, North Macedonia, Serbia
Eastern Europe and Caucasus	Armenia, Azerbaijan, Belarus, Georgia, Moldova, Turkey, Ukraine
Middle East	Iran, Iraq, Jordan, Lebanon, Syrian Arab Republic, West Bank and Gaza Strip, Yemen
East Africa	Burundi, Ethiopia, Kenya, Madagascar, Mozambique, Rwanda, South Sudan, Sudan, Tanzania, Uganda, Zambia
West Africa	Benin, Gambia, Liberia, Mali, Niger, Nigeria
Latin America and the Caribbean	Argentina, Brazil, Colombia, Costa Rica, Cuba, Ecuador, Haiti, Chile, Mexico, Nicaragua, Paraguay, Peru, Venezuela
Far East Asia	Cambodia, China, Indonesia, Lao People's Democratic Republic, Mongolia, Philippines, Thailand, Timor-Leste, Viet Nam
South and Central Asia	Afghanistan, Bangladesh, India, Kazakhstan, Kyrgyzstan, Maldives, Myanmar, Nepal, Pakistan, Sri Lanka, Tajikistan, Uzbekistan
Other countries	Algeria, Angola, Egypt, Lesotho, Libya, Namibia, South Africa, Tunisia

Source: Authors' own elaboration, based on OECD (2021b) data.

REFERENCES

Act No. 392/2015 Coll. on Development Cooperation and on Amendment to Certain Acts.

ALESINA, A., DOLLAR, D. (2000). Who gives foreign aid to whom and why? *Journal of Economic Growth*, 5, 33-63. DOI: https://doi.org/10.1023/A:1009874203400

BARTHEL, F., NEUMAYER, E., NUNNENKAMP, P., SELAYA, P. (2014). Competition for export markets and the allocation of foreign aid: The role of spatial dependence among donor countries. *World Development*, 64(C), 350-365. DOI: https://doi.org/10.1016/j.worlddev.2014.06.009

BERTHÉLEMY, J. C. (2006). Bilateral donors' interests vs. recipients' development motives in aid allocation: Do all donors behave the same? *Review of Development Economics*, 10, 179-194. DOI: https://doi.org/10.1111/j.1467-9361.2006.00311.x

BERTHÉLEMY, J. C., TICHIT, A. (2004). Bilateral donors' aid allocation decisions – A three-dimensional panel analysis. *International Review of Economics & Finance*, 13, 253-274. DOI: https://doi.org/10.1016/j.iref.2003.11.004

BOWLES, P. (1987). Foreign air and domestic savings in less developed countries: Some tests for causality. *World Development*, 15, 789-796. DOI: https://doi.org/10.1016/0305-750X(87)90060-X

BURNSIDE, C., DOLLAR, D. (2000). Aid, growth and policies. *American Economic Review*, 90, 847-868. DOI: https://www.jstor.org/stable/117311

CANAVIRE-BACARREZA, G., NUNNENKAMP, P., THIELE, R., TRIVEÑO, L. (2005). *Assessing the allocation of aid: Developmental concerns and the self-interest of donors*. Kiel Working Papers, Working Paper No. 1253. Kiel (Kiel Institute for World Economics).

COLLIER, P., DOLLAR, D. (2004). Development effectiveness: What have we learnt? *The Economic Journal*, 114, 244-271. DOI: https://doi.org/10.1111/j.1468-0297.2004.00221.x

Distance Calculator (2021). *Distance Calculator*, [Online]. Available: https://www.distancecalculator.net/ [accessed 6 September 2021].

DOUCOULIAGOS, H., MANNING, E. (2009). *The allocation of development aid assistance: Do new donors have old motive?* School Working Paper, Economic Series SWP 2009/17. Melbourne (Deakin University, Faculty of Business and Law).

DREHER, A., NUNNENKAMP, P., ÖHLER, H., WEISSER, J. (2009). *Acting autonomously or mimicking the state and peers? A panel Tobit analysis of financial dependence and aid allocation by Swiss NGOs*. Kiel Working Papers, Working Paper No. 1486. Kiel (Kiel Institute for World Economics).

DREHER, A., NUNNENKAMP, P., THIELE, R. (2011). Are 'new' donors different? Comparing the allocation of bilateral aid between nonDAC and DAC donor countries. *World Development*, 39, 1950-1968. DOI: https://doi.org/10.1016/j.worlddev.2011.07.024

European Commission (2017). *The new European consensus on development 'our world, our dignity, our future'*, [Online]. Available: https://ec.europa.eu/international-partnerships/system/files/european-consensus-on-development-final-20170626_en.pdf [accessed 10 December 2021].

Freedom House (2021). *Freedom in the world*, [Online]. Available: https://freedomhouse.org/report/freedom-world [accessed 3 September 2021].

HARMÁČEK, J., SYROVÁTKA, M., OPRŠAL, Z. (2017). Analýza faktorů selekce a alokace rozvojové pomoci s využitím panelových dat a metod Probit a Tobit. *Politická ekonomie*, 65, 179-197. DOI: https://doi.org/10.18267/j.polek.1135

HARRIGAN, J., WANG, C. (2011). A new approach to the allocation of aid among developing countries: Is the USA different from the rest? *World Development*, 39, 1281-1293. DOI: https://doi.org/10.1016/j.worlddev.2010.12.011

HECKMAN, J. J. (1976). The common structure of structure of statistical models of truncation, sample selection and limited dependent variables and a simple estimator for such

models. *Annals of Economic and Social Measurement*, 5, 475-492, [Online]. Available: https://ideas.repec.org/h/nbr/nberch/10491.html [accessed 3 September 2021].

HECKMAN, J. J. (1979). Sample selection bias as a specification error. *Econometrica*, 47, 153-161. DOI: https://doi.org/10.2307/1912352

HOEFFLER, A., OUTRAM, V. (2011). Need, merit, or self-interest – What determines the allocation of aid? *Review of Development Economics*, 15, 237-250. DOI: https://doi.org/10.1111/j.1467-9361.2011.00605.x

KAUFMANN, D., KRAAY, A., MASTRUZZI, M. (2010). *The worldwide governance indicators: Methodology and analytical issues*. World Bank Policy Research Working Paper 5430. Washington (World Bank).

KRUGMAN, P. (1998). What's new about the new economic geography? *Oxford Review of Economic Policy*, 14(2), 7-17. DOI: https://doi.org/10.1093/oxrep/14.2.7

LUNDSGAARDE, E., BREUNING, C., PRAKASH, A. (2010). Instrumental philanthropy: Trade and the allocation of foreign aid. *Canadian Journal of Political Science*, 43, 733-761. DOI: https://doi.org/10.1017/s0008423910000661

McGILLIVRAY, M. (2003). Modelling aid allocation: Issues, approaches and results. *Journal of Economic Development*, 28, 171-188.

McKINLAY, R. D., LITTLE, R. (1979). The US aid relationship: A test of the recipient need and the donor interest models. *Political Studies*, 27, 236-250. DOI: https://doi.org/10.1111/j.1467-9248.1979.tb01201.x

MFEA (2003). *Medium-term strategy for development cooperation of the Slovak Republic for 2003-2008*. Bratislava (Ministry of Foreign and European Affaires of the Slovak Republic), [Online]. Available: https://hsr.rokovania.sk [accessed 22 September 2021].

MFEA (2009). *Medium-term strategy for development cooperation of the Slovak Republic for 2009-2013*. Bratislava (Ministry of Foreign and European Affaires of the Slovak Republic), [Online]. Available: https://hsr.rokovania.sk/13859/1-/ [accessed 18 September 2021].

MFEA (2013). *Medium-term strategy for development cooperation of the Slovak Republic for 2014-2018*. Bratislava (Ministry of Foreign and European Affaires of the Slovak Republic), [Online]. Available: https://slovakaid.sk/en/new-medium-term-oda-strategy-approved/ [accessed 19 September 2021].

MFEA (2019). *Medium-term strategy for development cooperation of the Slovak Republic for 2019-2023*. Bratislava (Ministry of Foreign and European Affaires of the Slovak Republic), [Online]. Available: https://slovakaid.sk/strategia-sr-a-agenda-2030/ [accessed 16 September 2021].

NEUMAYER, E. (2003). The determinants of aid allocation by regional multilateral development banks and united nations agencies. *International Studies Quarterly*, 47, 101-122. DOI: https://doi.org/10.1111/1468-2478.4701005

OECD (2019). *OECD development co-operation peer reviews: Slovak Republic 2019*. *OECD Development Co-operation Peer Reviews*. Paris (OECD Publishing). DOI: https://doi.org/10.1787/9789264312326-en

OECD (2021a). *Development co-operation profiles. Slovak Republic*, [Online]. Available: https://www.oecd-ilibrary.org/sites/77bf5d3c-en/index.html?itemId=/content/component/77bf5d3c-en [accessed 3 October 2021].

OECD (2021b). *Aid (ODA) disbursements to countries and regions [DAC2a]*, [Online]. Available: https://stats.oecd.org/Index.aspx?DataSetCode=Table2A [accessed 7 September 2021].

OPRŠAL, Z., HARMÁČEK, J. SYROVÁTKA, M. (2017). Geography of Czech aid: Where and why Czechia promotes development? *Geografie*, 122, 169-189. DOI: https://doi.org/10.37040/geografie2017122020169

OPRŠAL, Z., HARMÁČEK, J., VÍTOVÁ, P., SYROVÁTKA, M., JARECKA-STĘPIEŃ, K. (2021). Polish and Czech foreign aid: A 'mélange' of geopolitical and developmental objectives. *Journal of International Relations and Development*, 24, 279-305. DOI: https://doi.org/10.1057/s41268-020-00192-x

ROEMER, M., GUGERTY, M. K. (1997). *Does economic growth reduce poverty?* Discussion Papers, CAER II Discussion Paper No. 5. Cambridge (Harvard Institute for International Development).

ROODMAN, D. (2007). *Macro aid effectiveness research: A guide for the perplexed*. Working Paper No. 134. Washington (Centre for Global Development).

SLÁDKOVÁ, Z., KABA, D. (2021). *AIDWATCH 2021*, [Online]. Available: https://ambrela.org/wp-content/uploads/2021/10/Ambrela_report_Aidwatch_za_rok_2020.pdf [accessed 4 April 2022].

SZENT-IVÁNYI, B. (2012). Aid allocation of the emerging central and eastern European donors. *Journal of International Relations and Development*, 15, 65-89. DOI: https://doi.org/10.1057/jird.2011.19

V-Dem (2021). *Varieties of democracy. V-Dem Dataset Version 11.1*, [Online]. Available: https://www.v-dem.net/vdemds.html [accessed 9 September 2021].

VITTEK, M., LIGHTFOOT, S. (2009). The Europeanisation of Slovak development cooperation? *Contemporary European Studies*, 4, 20-36. DOI: https://www.ceeol.com/search/article-detail?id=176195

WOOLDRIDGE, J. M. (2012). *Introductory econometrics: A modern approach*. Boston, MA (Cengage Learning).

YOUNG, F. H. (1985). Atlas of the United States foreign relations. Washington (U.S. Government Printing Office).

Internet sources:

ITC (2021). *International trade statistics 2001-2020*, [Online]. Available: https://www.intracen.org/itc/market-info-tools/trade-statistics/ [accessed 3 November 2021].

UNDP (2021). *Human Developments Reports*, [Online]. Available: http://hdr.undp.org/en/indicators/103006 [accessed 20 November 2021].

World Bank (2021). *World Development Indicators*, [Online]. Available: https://databank.worldbank.org/governance/wgi/ [accessed 15 March 2022].

World Bank (2022). *Worldvie Governance Indicators*, [Online]. Available: https://info.worldbank.org/source/world-development-indicators [accessed 10 October 2021].

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HLAVNÉ DETERMINANTY TERITORIÁLNEJ ALOKÁCIE BILATERÁLNEJ ROZVOJOVEJ POMOCI SLOVENSKEJ REPUBLIKY: HISTORICKÁ PODMIENENOSŤ?

V roku 2003 začala Slovenská republika poskytovať bilaterálnu oficiálnu rozvojovú pomoc (ODA) a v roku 2013 sa stala členom Výboru OECD pre rozvojovú pomoc. V súčasnosti je SR z hľadiska počtu prijímateľských krajín a objemu alokovaných finančných prostriedkov malým, ale etablovaným poskytovateľom rozvojovej spolupráce v rámci medzinárodnej donorskej komunity a nie je adekvátne naďalej považovať Slovensko za tzv. nového darcu. V tejto súvislosti je dôležité poznamenať, že podľa našich vedomostí existuje značná medzera v odbornej literatúre, najmä empirickej, ktorá by sa venovala rôznym dimenziám poskytovania bilaterálnej ODA zo strany Slovenska. Zámerom predkladaného článku je preto prispieť k literatúre danej problematiky prostredníctvom kvantitatívnej analýzy teritoriálneho aspektu prideľovania slovenskej ODA. Cieľom článku je empiricky preskúmať hlavné determinanty teritoriálnej selekcie a alokácie slovenskej bilaterálnej rozvojovej pomoci v rokoch 2003 – 2019. Pre naplnenie tohto cieľa aplikujeme regresnú analýzu panelových dát využívajúc metódy Probit a Tobit a údaje zodpovedajúce záujmom darcu, ako aj potrebám a zásluhám príjemcu. V článku sa zaoberáme výskumnou otázkou, či alokácia slovenskej ODA je viac ovplyvnená záujmami darcu, potrebami príjemcu alebo či je determinovaná historickými súvislosťami. Ďalej analyzujeme súlad koncepčných dokumen-

tov slovenskej rozvojovej politiky štyroch na seba nadväzujúcich strednodobých stratégií rozvojovej spolupráce SR so skutočnou alokáciou rozvojovej pomoci v kontexte teritoriálnych priorít.

Vo všeobecnosti možno konštatovať, že najväčšie prijímateľské krajiny slovenskej rozvojovej pomoci zodpovedajú indikatívnemu zoznamu partnerských krajín, ktorý je súčasťou každej strednodobej stratégie. Teritoriálne priority ODA SR sú v priebehu času konzistentné a väčšina rozvojovej pomoci tradične smeruje do regiónov pozostávajúcich z krajín so strednými príjmami, ako sú západný Balkán, východná Európa a východná Afrika (Keňa). Dôvodom je najmä geografická a kultúrna blízkosť, politické záujmy (stabilita v regióne a eurointegračný proces) a podobné historické skúsenosti, či už z obdobia komunizmu alebo transformácie na trhovú ekonomiku. Je pochopiteľné, že Slovenská republika, ako malý darca s obmedzenými finančnými zdrojmi a logistickými kapacitami, alokuje svoju pomoc do malého počtu prijímateľských krajín. Prikláňame sa však k názoru, že Slovensko by malo prehodnotiť nielen teritoriálne priority uvedené v strednodobých stratégiách, ale aj skutočne alokovať rozvojovú pomoc do menej rozvinutých krajín, a to v nadväznosti na Európsky konsenzus o rozvoji (European Commission 2017) a mnohé iné odporúčania.

Výsledky regresnej analýzy do značnej miery potvrdzujú predchádzajúce tvrdenia. Základnými štatisticky významnými determinantmi selekcie a teritoriálnej alokácie rozvojovej pomoci SR sú historické vzťahy (aproximované členstvom, pridruženým členstvom, štatútom pozorovateľa alebo blízkymi vzťahmi s RVHP), existencia zastupiteľského úradu SR, geografická vzdialenosť, „efekt zotrvačnosti" v politickom rozhodovaní o alokácii ODA, veľkosť populácie a očakávaná dĺžka života pri narodení v prijímateľských krajinách. Z uvedeného vyplýva, že SR inklinuje k výberu a poskytovaniu pomoci najmä tým krajinám, s ktorými má historicky významné vzťahy, kde už alokuje pomoc a ktoré sú geograficky bližšie. Ďalším dôležitým faktorom je prítomnosť veľvyslanectva v krajine prijímajúcej pomoc, čo reflektuje nielen politické záujmy darcu, ale aj logistické, personálne a technické kapacity pri implementovaní pomoci. Na druhej strane, Slovensko má tendenciu alokovať viac ODA do tých rozvojových a tranzitívnych krajín, ktoré majú väčší počet obyvateľov a zároveň lepšie výsledky v ukazovateľoch sociálno-ekonomického rozvoja, resp. výkonnosti sociálnych politík. Výsledky regresnej analýzy tiež indikujú, že SR pri výbere a alokácii rozvojovej pomoci neberie vo významnej miere ohľad na potreby a „zásluhy" príjemcov. Na základe územných priorít stanovených v strednodobých stratégiách, skutočnej distribúcie rozvojovej pomoci SR a výsledkov regresnej analýzy konštatujeme, že slovenská ODA nasleduje skôr „trajektóriu minulosti ovplyvňujúcej budúcnosť", alebo inými slovami, tradičné vzory prideľovania rozvojovej pomoci determinované historickými, politickými a geografickými faktormi.