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**BILATERAL OFFICIAL DEVELOPMENT ASSISTANCE: IMPACT OF
THE GLOBAL FINANCIAL CRISIS OF 2008-2009**

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Motivation.

The recession of 2008-09 had a major impact on developing countries and a particularly strong effect on the poorest nations. The consequences of exports reduction combined with volatile prices on raw materials and the decrease in money transfers continue to exert a negative influence on their growth and development prospects.

Promotion of international development as a mechanism targeting the resolution of developing countries' problems can help overcome the fallout of the global financial crisis. Assistance provided by developed countries constitutes an important source for financing recipients' development projects, particularly for the countries that have no access to international capital markets. Sometimes donors may contribute more than a third of a small country's GDP and over \$500 per capita annually. That is why the survival of some countries hinges upon international assistance.

Since the 1950s, applied analytics was dominated by the theory of donor selfishness, i.e. the provision of assistance in donors' own interests as opposed to the needs of developing countries. While in the 21st century (before the recession) the idea of providing assistance as a means to promote selfish interests was still popular, another construct started to gain ground with its concept of increasing altruism of donor countries. Active growth in the promotion of development observed in the years following the recession, especially the increase in the share of aid disbursed to the least developed countries, presumably supports this stance.

In modeling the effect of financial crisis on the allocation of development assistance, this study introduces new points which support the idea of donor selfishness and the need to create additional incentives that would allow for the distribution of development assistance in favor of the countries that need it most.

Brief literature review.

Allocation of aid is well-thought-out in foreign and Russian academic literature. Place and role of official development aid is discussed in research of such authors as J. Sachs, W. Easterly, J. Stiglitz, A. Sen, D. Moyo. Many

publications pay attention to the problem of motives of aid allocation and factors affecting it. Starting from R.McKinlay and R.Little is it widely accepted to separate these factors into two groups: donor interests and recipient needs. The above article analyzed ODA from USA, Germany, France and UK, and it was concluded that politic and economic dominate. V.I.Bartenev and E.N.Glazunova state that later researches using new factors and analyzing more countries support this hypothesis of prevailing donor interests. As a rule, authors highlight economic and political interests of donor countries. According to S.Gates and A.Hoeffler, Scandinavian countries are an exception – Denmark, Finland, Norway and Sweden. They allocate aid to more needy and poor recipients.

In 2006 G.Canavire, P.Nunnenkamp, R.Thiele, L.Triveño conducted one of the first researches demonstrating that some donors at the beginning of XXI became more attentive to recipient needs, although Australia, France, Italy, Japan and USA follow their own interests in the first place. Analysis of aid from individual countries, conducted by R.McDonald, J.Hoddinott, S.Chand, J.Faust and S.Ziaja, demonstrated more emphasis of Canada, Australia and Germany on poor countries, which is reflected by higher significance of recipient GDP per capita among factors influencing aid allocation. V.I.Bartenev and E.N.Glazunova highlighted, that donor countries in the middle of 2000-s “introduced approaches aimed at satisfaction of recipient needs [Bartenev, Glazunova, 2012 p. 132], decreasing importance of their commercial and political interests. S.Claessens, D.Cassimon and B.Van Campenhout on the base of analysis of bilateral aid in 1970-2004 concluded that donors changed their behavior at the beginning of XXI century, and showed that significance of recipient GDP per capita increased. Analysis of number of poor in recipient countries and its impact on aid allocation in 2010-2015, conducted by M.McGillivray and M.Clarke allowed to conclude that “total aid flows are relatively fair” [McGillivray M., Clarke M., 2018, p. 1073]. F.Bickenbach, A.Mbelu, P.Nunnenkamp on the base of analysis of bilateral ODA in 1995-2015 showed that “overall aid has become slightly more concentrated on

relatively poor recipient countries since 2005” [Bickenbach, F., Mbelu, A., Nunnenkamp, P., 2017, стр. 24].

However financial crisis of 2008-2009 given budget constraints of donor countries may reverse this trend. For example, E.Frot on the base of ODA data from 1986-1996 showed that its volumes decrease on average by 13% after banking crisis in donor countries (in total), or by 5% annually from the beginning of the crisis. E.Dabla-Norris, C.Minoiu, L.-F. Zanna on the base of ODA data in 1970-2004 showed that in recession donor countries decrease ODA volumes by 11.3%. D.Roodman in 2008 graphically demonstrated that Finland, Japan, Norway and Sweden decreased their ODA budgets after domestic banking crises in 1990-s.

Thus previous crises influenced ODA allocation decisions by donor countries, and led to redirection of resources, allocated for ODA, to solving of domestic problems. Further analysis is required in order to examine sustainability of a trend of paying more attention to recipient needs which was highlighted in previous researches.

Objectives of the research. The objective of this study is to clarify and complement the model of ODA allocation taking into account changes in direction and volumes of official development assistance (ODA) after financial crisis of 2008-2009.

The aforementioned objective of the dissertation determines the need for consecutive resolution of the following issues:

1. Describe modern ODA system;
2. Update the classification of ODA participants based on the emergence of new donors and post-recession ODA data;
3. Identify key changes in post-recession ODA system;
4. Suggest a system of indices that can reflect the specifics of donors' selection of ODA directions and volume following the recession of 2008-09;
5. Perform regression analysis of the changes in the influence of these indices on donors' selection of ODA directions and volume following the recession of 2008-09;

6. Use the constructed model to make recommendations on the reformation of the ODA system.

Contribution. The study explores global issues in national development and the need for developed countries to provide assistance to developing nations. The author's contribution pursues the following objectives:

1. Elaborate the classification of donors depending on the purpose of ODA provision, specifically: suggested three subgroups of donors, following political interests (donors that allocate aid to neighbors, donors that allocate aid to former colonies, donor that allocate aid to military allies);

2. Identify changes in the ODA system following the recession of 2008-09 taking into account changes in donors' financial situation. First, in the ODA allocation system there are present some elements of altruism and priority for recipient need, which appears in increase of ODA volumes after crisis and increase of share of aid, directed to the least developed countries. Second, increased attention to the recipient needs before the crisis was not universal and insufficiently sustainable, which appears in decrease of share of grants and share of aid directed to actually development projects;

3. Suggest an adjusted model for the distribution of development assistance which accounts for changes in the relations between donors and recipients in the aftermath of the 2008-09 recession. It is showed that post-crisis model differs from the model before crisis in stronger-pronounced differences between donor groups and closer attention of donors to their own interests.

Methodology.

At the first stage of the study, the author splits donors into three groups, i.e. *altruists*, *business persons* and *politicians*. Grouping is based on results of 53 previous researches, published in 1977-2018 (including McKinlay, Little, 1977, Alesina, Dollar, 2000, Hoeffler, Outram, 2011, Bickenbach, Mbelu, Nunnenkamp 2017), which analyze factors behind aid allocation.

In order to qualify and amend the classification author conducted correlation and regression analysis based on annual assistance provided by 33 donors to 142

recipients in 2000-16 and five factors, affecting allocation of aid. On this stage three subgroups of *politicians* were introduced: donors that allocate aid to neighbors, donors that allocate aid to former colonies, donor that allocate aid to military allies.

(A) *Altruist donors* are identified based on the GDP per capita because, according to the majority of studies, that is the only indicator which reflects recipients' socioeconomic conditions.

(B) *Donors driven by commercial interest* are identified based on trade volume between donors and recipients. The author uses the trade turnover indicator, i.e. the aggregate of exports and imports as they pertain to a specific donor-recipient pairing. This indicator accounts for donors' two potential economic interests because a recipient may simultaneously serve as the source of resources for the donor (donor imports) and potential sales market (donor exports).

(C) *Donors' political interests* are determined based on the following three indicators which allow for splitting donors into three subgroups:

- distance between capital cities of the donor and the recipient is used to identify donors interested in securing their borders and providing assistance to neighboring countries;
- number of years showing how long a recipient was a donor's colony is used to identify donors that prefer to provide assistance to countries with which they have established economic and geopolitical relations resulting from the colonial past;
- arms transfer is used to identify donors that provide economic and social aid to countries which are their strategic allies.

Since donors may take into account recipients' progress when distributing ODA, the author analyzes indices which reflect the development of democratic institutions and the observance of human rights. For all countries, the correlation between ODA and these indices is either close to nil or negative and, consequently, it was eliminated from the final list of indices under consideration. Thus, we can conclude that over 2000-16 not a single donor engaged in systematic distribution

of assistance based on recipients' institutional progress in the observance of human rights or the development of democracy. This inference is particularly interesting as it applies to the U.S.A., where the provision of assistance is officially proclaimed as being contingent upon the establishment of a democratic society.

Inclusion of new donors, such as China and Iceland; and processing of indicators which were not analyzed for some countries (distance for Austria and Korea, arms transfer for China and OAE) allowed to update and elaborate results of previous researches.

At the second stage of the study, analytical conclusions pertaining to the recession's effect on the ODA system are complemented with the results of cross-country econometric analysis. The author performs regression analysis of panel data on 33 donors and 142 recipients (total number of inquiries – 35,615) between 2000 and 2016 splitting the period of observation into two subperiods: 2000-09 and 2010-16. The analysis shows that after the recession variables which characterize donor interest became more relevant for the majority of donors, while the role of recipient needs declined, especially among the most vulnerable groups of recipients. Since donors are sorted into groups, the author can analyze post-recession changes for each separate group of donors and manage to show differences in assistance distribution models before and after the recession for each group.

Author tested OLS, fixed-effect and random-effect regression. Wald, Breusch–Pagan and Hausman tests showed the preferability of the panel regression model with fixed effect. However, this model does not allow for estimation of coefficients of time-invariant variables. Two such variables - colonial past and distance - are of critical importance to the model. For such cases there is a method suggested by J.Hausman and W.Taylor. Comparison of Hausman-Taylor model and fixed-effect model showed the preferability of the Hausman-Taylor model for all donor groups and periods.

Author estimates the following regression:

$$\begin{aligned} \ln(Aid_{ijt}) = & \beta_1 * \ln(GDPpercapita_{jt-1}) + \beta_2 * \ln(Trade_{ijt-1}) + \\ & \beta_3 * Colony_{ij} + \beta_4 * \ln(Distance_{ij}) + \beta_5 * \ln(Arms_{ijt-1}) + \\ & \beta_6 * \ln(NetFlows_{jt-1}) + \beta_7 * \ln(OtherAid_{ijt}) + \beta_8 * \ln(Pop_{jt}) + \\ & \beta_9 * Democracy_{jt-1} + \beta_{10} * \ln(GDPdonor_{it-1}) + \beta_{11} * Haiti2010 + \\ & \sum_{k=t_1}^{t_2} \gamma_k * D_k + \varepsilon_{ijt} + u_{ij} , [1] \end{aligned}$$

where Aid_{ijt} – volumes of ODA of recipient country j , allocated by donor i to recipient j in a year t ; $GDPpercapita_{jt-1}$ - GDP per capita of recipient j in a year $(t - 1)$; $Trade_{ijt-1}$ – trade volume between donor i and recipient j in a year $t-1$; $Colony_{ij}$ – dummy variable, taking a value of 1 for recipient j , which is a former colony of donor i ; $Distance_{ij}$ – distance between capital of donor i and recipient j ; $Arms_{ijt-1}$ – arms sales of donor i to recipient j in a year $t-1$; $NetFlows_{jt-1}$ – net private inflows of recipient j in a year $t-1$; $OtherAid_{jt}$ – volume of ODA, received by recipient j from all donors, except donor i in a year t ; Pop_{jt} – population of recipient j in a year t ; $Democracy_{jt-1}$ – level of democracy in recipient country j in previous year $(t - 1)$; $GDPdonor_{it-1}$ – GDP of donor country i in previous year $(t - 1)$; $Haiti2010$ – dummy variable, taking a value of 1 for Haiti in 2010; D_k – dummy variable, fixed effect for each year from 2001 to 2016; ε_{ijt} – random element; u_{ij} – random effect, individual for each donor-recipient pair.

Main findings. Main findings submitted for dissertation defense:

1. Distribution of development assistance by donors in most cases does not reflect real recipients' needs or officially stated goals for providing such assistance. Analysis of donor strategies shows no difference in officially stated goals for providing assistance. In providing assistance, donors typically seek to eliminate extreme poverty, facilitate sustainable growth, support the development of democratic institutions, and establish the rule of law. All these goals predominantly reflect recipients' needs, but studies on actual ODA distribution

demonstrate that the provision of assistance as a means to increase recipients' living standards is not a priority for most donors. The truth of the matter is that donors' political, economic, and strategic interests play a key role in deciding on the provision of assistance and prevail over such motives as the promotion of economic growth, development support, and reduction of inequality in recipient countries.

2. This dissertation classifies donors into five groups based on criteria that affect the distribution of development assistance based on previous researches (including McKinlay, Little, 1977, Alesina, Dollar, 2000, Hoeffler, Outram, 2011). Results were actualized and elaborated using correlation and regression analysis (Table 1).

The first group of donors is the benchmark group because its members prioritize the promotion of international development and recipients' needs. Researchers typically refer to these donors as *altruists* because they comply with recommendations issued by international organizations and are less explicitly driven by national interests when distributing assistance (Gates, Hoeffler, 2004).

The second group of donors provisionally referred to as the *business persons* provides assistance based on established economic ties, including trading and investment relations. *Business persons* include such major donors as Germany and Japan. The importance role of trade and economic ties in their ODA distribution was pointed out in earlier research. The group also includes new donors – Latvia and Poland. For both countries, earlier studies noted the importance of distance, i.e. the factor which reflects the propensity to provide assistance to neighboring nations. The difference in results pertains to the change in the structure of assistance as compared to the period before the 2008-09 recession when prior studies were performed (for example, Szent-Ivanyi, 2010 used data for 2001-2008).

The third, fourth and fifth groups tend to provide assistance based on its own political interests. In previous works (Hoeffler, Outram, 2011) they were combined in one group by political motive, although researches used different

indicators to capture the effect (number of years of colonial dependence, distance, arms sales). Given the diversity of the group, the author splits this donor group into three subgroups: (1) donors which provide assistance to their former colonies; (2) donors which provide assistance to neighboring nations; (3) donors which provide assistance to their military allies.

Table 1. Country groups by the motive of ODA allocation

Group	Country	Average share of ODA in GNP, 2016	Sum of group ODA, bln. USD, 2016
« <i>Altruists</i> »	Denmark, Ireland, Iceland*, Italy, Canada, Luxembourg*, Netherlands, Norway, Finland, Sweden, Switzerland.	0.6	26.4
« <i>Business persons</i> »	Germany, Latvia*, Poland*, Slovenia, Japan.	0.3	11.1
« <i>Politicians</i> »: assistance to neighboring nations	Australia, Austria*, Greece, Israel*, Korea, Kuwait, New Zealand, Thailand, Turkey, Czech Republic, Estonia	0.3	21.3
« <i>Politicians</i> »: assistance to their former colonies	Belgium, UK, Spain, Portugal, France	0.4	34.5
« <i>Politicians</i> »: assistance to military allies	China*, OAE*, USA	0.7	38.7
<i>Incl. USA</i>		<i>0.18</i>	<i>34.4</i>

Source: composed by author on the base of correlation analysis of OECD data

Note: countries market by * are those for which new results were achieved: this factor was not analyzed or allocation of ODA was not analyzed.

3. Prior scholarly models for ODA distribution (Fuchs, Dreher, 2014, Banks, 2015, Berneo, 2017) do not fully account for changes in the ODA system

after the global recession of 2008-09. The financial crisis of 2008-09 brought on changes in the economies of both donors and recipients.

Donors' ability to provide ODA was hampered by: (1) decline in economic activity which lowered the tax base and, consequently, state revenue; and (2) increase in expenditure caused by countercyclical budget and tax expansion. These two processes resulted in the deterioration of fiscal budgets and a dramatic increase in the deficits of consolidated budgets, as well as an increase in the amount of debt in the first years following the recession. Thus, programs not related to supporting the economy faced limitations in state funding.

Post-recession changes exhibited by recipients involved increased demand for development assistance caused by: (1) 12.2% decline in global trade volume (the sharpest decline since World War II); (2) 4% decrease in the volume of money transfers into developing countries in 2009 (the largest decrease since 1970); and (3) high volatility of food prices, which had the strongest effect on the poorest countries where food expenditure exceeds 50% of total household expenses; the Food Price Index issued by the Food and Agriculture Organization increased by 25% in 2008 and 22% in 2011.

Moreover, donors faced more budget restrictions, and recipients exhibited an increase in ODA demand, which caused changes in the system promoting international development. Some of these shifts confirm prior findings which recorded an increase in donor attention to recipients' needs while other recorded changes go against these conclusions. The author delineates and analyzes the following trends:

- 2008-09 recession had an overall effect on bilateral development assistance for all countries which saw a drop in aggregate assistance in 2011 and 2012 by 1% and 5% respectively compared against 2010 data. Assistance volumes still exceeded pre-recession numbers due to a 1.6% increase in 2009 and 7% increase in 2010 compared against 2008. During previous crises of 1973, 1980, 1991, and 1998, ODA provided by affected countries on average dropped by 10% compared against the pre-

crisis period and typically took four years to rebound to pre-crisis level. A similar trend was expected to occur with the 2008-09 recession due to the deterioration of fiscal budgets, increase in the deficits of consolidated budgets, and donor debts. All these factors were supposed to result in the decrease in the volume of assistance. The absence of strong negative dynamics in the first years following the recession in spite of donors' growing budgetary limitations confirms the conclusion about an increase in donor attention to recipient needs.

- The share of the least developed countries among ODA recipients grew from 34% in 2000-09 to 44% in 2010-16, i.e. more ODA is now provided to nations that need it most, which also supports the idea of higher donor receptivity of recipient needs.
- In the aftermath of the recession, the share of ODA grants dropped from 86% to 83%, i.e. less assistance is provided pro bono. The metropolises and business persons groups showed the most dramatic decrease: from 90% in 2000-09 to 85% in 2010-16 and from 73% in 2000-09 to 70% in 2010-16, respectively. Such change in donor behavior undermines the conclusion about an increase in donor attention to recipient needs.
- The share of ODA expenses which de facto do not reach the recipient (administrative expenses related to the provision of ODA, student grants provided in the donor country, refugee-related expenses in the donor country, monies spent on raising awareness about development issues) increased from 8% in 2000-09 to 11% in 2010-17. This change is predominantly resulting from a spike in refugee-related expenses which saw a 4.5-fold increase in 2017 compared against 2009 and accounted for 9% of total assistance provided in 2017.
- The share of assistance designated specifically for development projects (in the social segment, infrastructure, and production development) decreased from 58% in 2009 to 47% in 2016. Consequently, we observed an increase in the share of humanitarian aid, debt forgiveness and other

areas which do not actually promote recipients' economic and social development.

- The share of multilateral development institutions in ODA distribution dropped from 26% in 2000-09 to 24% in 2010-17, i.e. more assistance is now provided on bilateral basis. Bilateral assistance is typically viewed as more politicized and less efficient in terms of its ability to resolve global issues and account for recipients' needs. At the same time, the recent turn of events in the provision of funding by major development institutions (their support of anti-Iranian and anti-Russian sanctions) demonstrated that multilateral assistance was also affected by political interests of participating donors. That is why this trend can be termed controversial, for it neither confirms an increase in donor selfishness nor disproves it.

4. Proposed post-recession (2010-16) ODA distribution model shows an increase in the role of factors which reflect donor priorities (Table 2). Thus, the differences of the post-recession assistance distribution model are as follows:

- *altruists* started to provide more assistance to recipients with lower GDP per capita;
- *business persons* started to provide more assistance to their trading partners and less assistance to recipients with low GDP per capita;
- *politicians which provide assistance to neighboring counties* started to pay more attention to recipients located closer to them;
- *metropolises* started to provide more assistance to their former colonies and less assistance to recipients with low GDP per capita;
- *politicians which provide assistance to their allies* focused on assisting their arms purchasers and provided less assistance to recipients with low GDP per capita.
- All donor countries do not pay attention to recipient countries' capacity to mobilize other financing for development, although

recommendations of international organizations highlight importance of allocating aid to countries with the least capacity to mobilize private investment.

The weight of components pointing to donor interest in this equation does not signify that these countries distribute assistance based exclusively on this criterion or their own interests. It just demonstrates the existence and importance of distinctive interests for each group of donors. For example, high importance of the trade index for the *business persons* group does not mean that all assistance is distributed exclusively to donors' trading partners.

Table 2 – Results of Hausman-Taylor model of bilateral ODA allocation by five donor groups, before and after crisis.

Variables	<i>Altruists</i>		<i>Business persons</i>		<i>Assistance to neighbors</i>		<i>Metropolises</i>		<i>Assistance to allies</i>	
	2000-2009	2010-2016	2000-2009	2010-2016	2000-2009	2010-2016	2000-2009	2010-2016	2000-2009	2010-2016
GDP per capita of recipient	-1.55*** (-7.7)	-2.96*** (-9.1)	-1.23*** (-4.3)	0.44 (1.3)	-0.01 (-0.1)	-0.52** (-2.3)	-1.01*** (-3.1)	-0.39 (-1.3)	-0.66*** (-2.8)	0.190 (0.2)
Trade	0.08** (2.2)	0.06 (1.6)	1.77*** (4.0)	2.01*** (4.2)	0.079** (2.5)	0.21*** (5.5)	0.06 (1.1)	-0.07 (-1.1)	0.24** (2.2)	0.158 (1.0)
Distance	-3.90** (-2.0)	1.37** (2.5)	-2.38** (-2.5)	-0.25** (-0.3)	-8.56*** (-2.7)	-11.40*** (-3.5)	1.18 (1.1)	-1.38** (-2.2)	-0.57*** (-4.9)	-0.37*** (-2.9)
Colony	-	-	-	-	1.93*** (5.7)	1.84*** (5.5)	4.65*** (6.1)	5.93*** (4.7)	-	-
Arms sales	-0.01 (-0.1)	-0.08 (-0.7)	0.07 (0.8)	0.08 (0.7)	0.04 (0.4)	-0.002 (-0.0)	0.01 (0.1)	0.01 (0.1)	1.57*** (13.4)	2.37*** (18.1)
Population	1.33*** (14.0)	1.00*** (7.0)	0.75*** (3.8)	0.77*** (5.0)	0.90*** (10.3)	0.57*** (6.6)	1.17*** (5.6)	1.35*** (10.5)	0.82*** (2.8)	1.47*** (2.8)
Net capital inflows	-0.08** (-2.5)	-0.05 (-1.1)	0.05 (1.3)	-0.03 (-0.5)	0.08** (2.4)	-0.08 (-1.6)	0.09** (2.2)	-0.09 (-1.5)	0.14* (1.8)	-0.07 (-0.6)
Donor GDP	0.09 (0.8)	1.92*** (5.4)	0.703*** (5.0)	1.26*** (3.4)	1.61*** (15.4)	2.47*** (8.9)	0.36** (2.0)	2.43*** (4.5)	1.60*** (5.7)	1.30* (1.8)
Democracy	0.43*** (2.8)	0.14 (0.6)	0.49** (2.5)	0.161 (0.7)	-0.37* (-2.2)	-0.23 (-1.1)	0.33 (1.5)	0.05 (0.2)	0.81** (2.0)	0.51 (0.8)
Other donors' ODA	0.40*** (10.1)	0.43*** (8.0)	0.46*** (10.0)	0.21*** (3.7)	0.27*** (6.2)	0.21*** (4.0)	0.49*** (9.1)	0.29*** (4.5)	0.30*** (3.0)	0.87*** (6.9)
Haiti 2010	-	3.51*** (3.6)	-	4.43*** (4.3)	-	5.25*** (5.4)	-	1.526 (1.2)	-	8.43*** (3.7)
Constant	-5.2 (-0.9)	13.1 (1.1)	-44.8*** (-5.2)	-31.7*** (-2.8)	-19.7*** (-4.9)	-40.5*** (-5.2)	-24.7** (-2.4)	-45.2*** (-2.8)	-34.0** (-2.2)	5.7 (0.2)
N of observations	10 774	7 969	4 063	3 205	11 903	8 862	5 572	4 095	3 270	2 134

t-statistics in parenthesis ***/**/* - significance on 1%/5%/10% level. All regressions control for fixed year effects using dummies for each year for 2001-2009 and 2011-2016.

In order to get a whole picture, the author assesses regression dependence of ODA volumes for three recipient groups based on their income level (Table 3) in accordance with 2016 World Bank classification (since the study processes data collected up to 2016).

As we have already shown, all regressions in donor groups exhibit negative dependency between recipient's GDP per capita and the volume of provided assistance. Still, regression outcomes for recipient groups show that assistance is not distributed in accordance with recipient needs in the most vulnerable countries, i.e. countries with the lowest income. Within a group, all other things being equal assistance is sent to countries with higher GDP per capita regardless of their access to other sources of funding. This being said, countries with the lowest income depend on ODA more than others; they need it in order to survive, for countries in this group have the highest share of population living below the absolute poverty line, lowest life expectancy, and the highest child and maternal mortality rates. And due to high market risks these are the countries which lack the ability to fund development projects from other sources.

Table 3 - Results of Hausman-Taylor model of bilateral ODA allocation by three recipient groups, before and after crisis.

Variables	Low income countries		Lower middle income countries		Upper middle income countries	
	2000-2009	2010-2016	2000-2009	2010-2016	2000-2009	2010-2016
GDP per capita of recipient	0.36*** (3.9)	0.87*** (3.6)	-1.05*** (-3.1)	0.03 (0.1)	-0.62** (-2.5)	-0.60** (-2.2)
Trade	0.03 (0.9)	0.10*** (2.7)	-0.01 (-0.4)	0.13*** (3.7)	0.12*** (4.0)	0.30*** (9.0)
Distance	1.26* (1.7)	-1.91** (-2.4)	-1.33** (-2.1)	-2.42*** (-8.0)	-0.80*** (-3.4)	-1.60*** (-7.5)
Colony	6.12*** (4.6)	5.24*** (3.4)	4.67*** (4.7)	6.12*** (2.7)	7.03** (2.2)	5.60*** (5.2)
Arms sales	0.36** (2.1)	0.253 (1.6)	0.24*** (2.9)	0.85*** (12.0)	0.15** (2.2)	0.12*** (2.8)
Population	1.35*** (7.1)	0.78*** (3.7)	0.46*** (2.9)	0.69*** (8.5)	0.64*** (3.7)	0.92*** (11.9)
Net capital inflows	0.07** (2.2)	0.17*** (4.4)	0.003 (0.1)	0.06 (1.3)	0.08*** (2.8)	0.10** (2.0)

Variables	Low income countries		Lower middle income countries		Upper middle income countries	
	2000-2009	2010-2016	2000-2009	2010-2016	2000-2009	2010-2016
Donor GDP	1.63*** (13.3)	1.90*** (6.2)	1.26*** (10.4)	2.12*** (10.5)	0.63*** (5.5)	1.48*** (7.0)
Democracy	0.10 (0.5)	0.85*** (3.9)	0.34** (2.3)	0.12 (0.8)	0.50*** (2.8)	-0.22 (-1.1)
Other donors' ODA	0.24*** (3.5)	0.50*** (4.4)	0.69*** (15.6)	0.35*** (5.9)	0.22*** (7.1)	0.20*** (5.7)
Haiti 2010	-	3.98*** (7.8)	-	-	-	-
Constant	-52.5*** (-7.2)	-34.3*** (-3.3)	-18.9*** (-3.2)	-22.8*** (-3.6)	-8.8 (-1.6)	-15.4** (-2.2)
N of observations	9 297	7 533	13 639	11 502	14 972	13 117

t-statistics in parenthesis

***/**/* - significance on 1%/5%/10% level

All regressions control for fixed year effects using dummies for each year for 2001-2009 and 2011-2016.

5. Based on the proposed model for the distribution of development assistance and on the analysis of changes in the post-recession ODA system, the author provides priority recommendations on the reformation of the international development assistance system that would raise the efficiency of assistance distribution for development purposes. First, it is necessary to stimulate bounding of ODA to recipient needs and development goals. Second, we need to exclude donors' student- and refugee-related expenses from aggregate assistance because these segments nominally increase assistance volume without promoting recipients' development. Third, it is necessary to stimulate implementation of recommendations of international organizations, especially in coordination of recipient's capacity to attract other financing sources for development and ODA allocation.

List of author's original articles:

Articles published in journals recommended by the Higher Attestation Commission:

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2. Morozkina A., Sabelnikova E. Education Systems and Multilateral development Banks: International Practices and Perspectives// International Organisations Research Journal, 2017 Vol.12 №1, pp. 24-42
3. Morozkina A. The New Development Bank in Global Finance and Economic Architecture.// International Organisations Research Journal, 2015 Vol.10 №2, pp. 89-105
4. Kulpina V., Morozkina A., Pavlyushina V., Shuvaeva D. Russia-BRICS Cooperation on Social Issues.// International Organisations Research Journal, 2015 Vol.10 №4, pp. 49-71

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5. Morozkina A. The New Development Bank in the global financial and economic architecture. In Kirton J., Larionova M. (Eds.) *BRICS and global governance*. London: Routledge. 2018, pp. 91-105.
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7. Flores R., Oliveira I., Carneiro F., Mutanga S., Simelane T., Makarov I. A., Morozkina A., Wood C., Mothiane M. Drivers of Regional Integration: Value Chains, Investment and New Forms of Co-operation. Johannesburg : Economic Policy Forum (EPF) and South African Institute of International Affairs (SAIIA), 2015.
8. Leonid Grigoryev, Alexandra Morozkina «Infrastructure Investment in BRICS Countries» in «VII BRICS Academic Forum» (Ed.: G. Toloraya), 2015. ISBN 978-5-394-02691-1