STUDY ON THE IMPACT OF DONORS' AID TRANSPARENCY ON THEIR AID VOLUME

By

JO, Wongi

Thesis

Submitted to

KDI School of Public Policy and Management

In Partial Fulfillment of the Requirements

For the Degree of

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Committee in charge:

Professor Kim, TaeJong, Supervisor _____

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ABSTRACT

A STUDY ON THE IMPACT OF DONORS' AID TRANSPARENCY ON THEIR AID VOLUME

By

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While the international development cooperation community is bearing a double burden of increasing the volume of foreign aid and enhancing its effectiveness and accountability at the same time, this study aims to explore whether aid transparency of donor agencies, among other determinants of foreign aid, has any impact on their aid volume. Fixed effects regressions using panel data over 2011-2017 for 51 donor agencies in 36 donor countries are used in the analysis. The results find that donor agencies in more populated countries spare less aid budget, implying the existence of economies of scale. On the political side, donors with more women in parliaments tend to show higher generosity, while fractionalized opposition party has negative influence. In addition, pro-poor donors with larger government and social expenditure appear to also spend more for international redistribution. However, in contrast to existing studies, domestic inequality proxied by income held by the bottom quantile and Gini coefficient is examined to be positively correlated with foreign aid. Aid transparency of donor agencies, captured by Aid Transparency Index and its separate components, is found to be insignificant as determinants of aid allocation decisions.

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First and foremost, I would like to thank God who gives me strength in any and every situation. It is my obligation to extend my profound gratitude to my supervisor, Professor Taejong Kim, who has offered consistent motivation and priceless guidance in writing this thesis. It was also an honor to have Professor Chrysostomos Tabakis as my advisor. I deeply appreciate his support and generosity. And finally, I would like to thank my family, especially Jimin and Sewon, my wife and brother, who taught me love.

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1. INTRODUCTION

This study aims to study which factors determine the size of foreign aid provided to developing world by donor agencies. More specifically, this study tries to examine whether factors that have been considered to be influential in previous literature still apply to aid allocation in recent years; whether transparency of donor agencies, which is becoming increasingly important in securing aid effectiveness and accountability, also serves as another determinant of their generosity; and whether securing donor transparency can eventually provide the international development cooperation community with a basis for further scale-up.

1.1. Why Volume of Foreign Aid Matters

Despite the controversy over whether foreign aid is effective or not, the international development cooperation community has been trying to grow the pie—to raise the volume of foreign aid provided to improve the lives of underserved population of the world. Development assistance has been pursued as an obligation, in part, that members of an "interdependent world community" must carry,[1] with the well-known 0.7% of gross national income (GNI) target proposed in the Pearson Commission in 1969.[2]

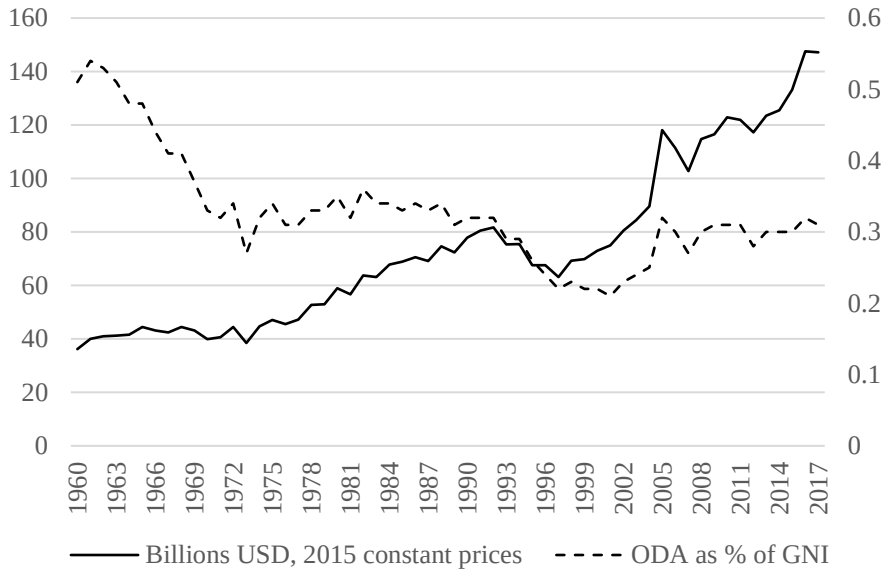
The 0.7% ODA/GNI ratio has been widely accepted by donor countries as a major objective. As illustrated with a full line in Figure A below, official development assistance (ODA) has gradually expanded by far, especially since the beginning of the new millennium with the

[1] "If a rationale for aid can gain some support from the record, it remains that more compelling reasons must be adduced. There are at least two such. The first is a moral reason and is based on the universally accepted proposition that it is the duty of the fortunate to help those who need. Enlightened national interest, expressed in terms of an interdependent world community, is the second reason." (World Bank. *The Pearson Commission - July 2003*. 2016. World Bank Group Archives Exhibit Series; No. 030.)

[2] The original target proposed by the Pearson Commission was to raise ODA to 0.7% of gross national product (GNP), and it was replaced by GNI from 1993 when OECD revised its National Accounts Statistics. (OECD. *The 0.7% ODA/GNI target - a history.* https://www.oecd.org/dac/stats/the07odagnitarget-ahistory.htm.)

introduction of the Millennium Development Goals (MDGs), although experiencing decreases in the late 1990s and 2007. Increasing by over 60% Since 2000, foreign aid has been a stable financing source for international development (OECD 2015).

Figure A. Net Official Development Assistance 1960-2017
(OECD Data, Net ODA statistics)



However, the target has never been achieved among donors in a collective sense, as described with a dotted line in Figure A above. The average ODA/GNI ratio has long been stable around 0.3%, for over a decade after 2005. Only 9 countries, by far, have provided aid more than 0.7% at least for one year: Denmark, Liechtenstein, Luxembourg, Netherlands, Norway, Sweden, Turkey, the United Arab Emirates, and the United Kingdom (based on OECD Data, Net ODA statistics).

Recently, the need for further increase in foreign aid has been raised with the adoption of even broader and more ambitious agenda, the Sustainable Development Goals (SDGs), which is composed of 17 goals and 169 targets. United Nations Conference on Trade and Development (UNCTAD) estimated in a report that achieving SDGs would require 2.5 trillion dollars

annually in developing countries, to fill the financing gap from 2015 to 2030. (UNCTAD 2014)

In this sense, through discussions on development financing that took place in Monterrey (2002), Doha (2008), and Addis Ababa (2015), donor countries have re-confirmed their commitments to reach the ODA/GNI ratio target, while emphasizing the importance of mobilizing various and unconventional sources of financing for development, such as financial resources at home, foreign investment, private flows, and trade, as well as innovative finance as described in Table A below (Park and Oh 2015).

Table A. Comparison of Discussions on Financing for Development (Modified by Author from Kim et al. 2011)

	Monterrey Consensus (2002)	**Doha Declaration (2008)**	**Addis Ababa Action Agenda (2015)**
Action areas	A. Mobilizing domestic financial resources for development B. Mobilizing international resources for development: foreign direct investment and other private flows C. International Trade as an engine for development D. Increasing international financial and technical cooperation for development E. External Debt F. Addressing systemic issues: enhancing the coherence and consistency of the international monetary, financial and trading systems in support of development	A. Mobilizing domestic financial resources for development B. Mobilizing international resources for development: foreign direct investment and other private flows C. International trade as an engine for development D. Increasing international financial and technical cooperation for development E. External Debt F. Addressing systemic issues: enhancing the coherence and consistency of the international monetary, financial and trading systems in support of development G. Other new challenges and emerging issues	A. Domestic public resources B. Domestic and international private business and finance C. International development cooperation D. International trade as an engine for development E. Debt and debt sustainability F. Addressing systemic issues G. Science, technology, innovation, and capacity building

1.2. Why Transparency of Foreign Aid Matters

While bearing the burden of scale-up on one hand, the international development cooperation community is also facing greater demand for value for money—improving effectiveness and accountability of existing development aid. Donors have endeavored to utilize their limited aid in more efficient manners, through 4 times of the High-Level Fora on Aid Effectiveness from Rome (2002) to Busan (2011).

Transparency, in particular, was suggested as one of the crucial factors to enhance aid effectiveness. Developed and developing countries gathered in Paris defined "lack of transparency", together with corruption, as an obstacle that hinders public support and effective allocation of resources. Both donors and recipients committed to enhance transparency in using development resources, while the former, in particular, to reveal their development assistance by disclosing "transparent" information so that developing countries can report to their public and legislative body (OECD 2005). By calling for a specific action, the 3rd High-level Forum gave concrete shape to the commitment for transparent foreign aid with the adoption of Accra Agenda for Action: "donors will publicly disclose regular, detailed and timely information on volume, allocation and, when available, results of development expenditure to enable more accurate budget, accounting and audit by developing countries" (OECD 2008).

In order to implement the specific action, the International Aid Transparency Initiative (IATI) was initiated with participation of diverse stakeholders including donors, recipients, civil society, etc. IATI has established a platform for donors to publish data and information on their development assistance, so as to enable any stakeholders can easily access how aid is spent. In line with the initiative, Publish What You Fund (PWYF), a UK-based NGO has published Aid Transparency Index (ATI), to present transparency performance of donor "agencies" since 2010.

1.3. How to Measure Transparency as a Determinant of Foreign Aid

This study examines the significance of donors' aid transparency as one of determinants of their aid volume. Aid transparency is measured by ATI datasets published in the year of 2013, 2014, 2015, and 2016 that share the same 39 component indicators in common. Methodology of how ATI is organized and measured is discussed in more detail later in Chapter 2.

Aid volume is calculated by net ODA disbursement of each donor agency in relation to GNI of its country, captured in Creditor Reporting System (CRS) of Organization for Economic Co-operation and Development (OECD). Other factors selected for potential determinants are measured by indicators mostly from OECD International Development Statistics (IDS); World Development Indicators (WDI) of World Bank; and Database of Political Institutions 2017 (DPI 2017) of Inter-American Development Bank (IDB).

The rest of this study is constructed as follows: Section 2 reviews which factors have been considered as determinants of donors' aid volume in previous literature; Section 3 outlines theoretical background and draws out research questions; Section 4 specifies methodology and states measurements and sources of data used for analysis; Section 5 interprets results and presents findings; while Section 6 concludes and provides implications.

2. LITERATURE REVIEW

2.1. Literature on Determinants of Foreign Aid

How is foreign aid allocated? In order to answer this question, most existing studies, from the early to even recent ones, have tried to examine how foreign aid was allocated among recipient countries (McKinlay and Little 1977; 1978; McGillivray and White 1993; Trumbull and Wall

1994; Alesina and Dollar 2000; Ali and Isse 2006; Clist 2011; etc.). It was because they were basically based on the perspective that aid is not determined by actual needs of recipient countries, but by unpredictable standards of donors—which have been, in part, political and strategic (UNDP 1992; Alesina and Dollar 2000). Factors commonly acknowledged by the previous studies includes colonial past, political alliances, democratic status, investment outlook, poverty, civil liberty, etc.

Contrary to the extensive literature focusing on factors on the recipients' side, much fewer have concentrated on how foreign aid was allocated within donor countries (Faini 2006). Beenstock (1980) and Mosley (1985) were among the first studies that paid attention to the question and examined factors affecting aid volume (Fuchs et al. 2014). More recently from the early 2000s, as the international development cooperation community has consistently called for scale-up of aid and put more emphasis on mutual accountability between donor and partner countries, more scholars have attempted analyzing what determines the portion of foreign aid within government budget, that is basically financed by taxpayers of each donor.

Factors covered by selected previous literature can be grouped into 3 categories: economic factors; political factors; and social and other factors. In addition, in accordance with their significance as determinants of foreign aid, they can also be grouped into three different categories: factors with a positive relationship; factors with a negative relationship, and factors with a mixed or insignificant relationship, as summarized in Table B.

2.1.1. Economic Factors

(a) Income Level

Development aid provided to developing economies is considered as a good for public interests that is supplied by governments of developed economies. (Fuchs et al. 2014). Mosley (1985)

argued that demands of the public, more specifically taxpayers, that provides financial sources for development assistance, should be taken into consideration, and the demand is determined by their judgement of whether they can afford the good or not. This is in line with the perception that foreign aid is a luxury good which demand rises more than proportionally as income does (Dudley 1979), and the logical framework of political systems which is discussed more closely later in Chapter 3 (Easton 1965).

Previous studies have found that aid volume tends to increase alongside *GDP per capita*, in case when the correlation was statistically significant (Round and Odedokun 2004; Boschini and Olofsgård 2007; Bertoli et al. 2008; Dreher and Fuchs 2011; Fuchs et al. 2014), although income elasticity of 0.49 indicated by Boschini and Olofsgård (2007) implied that foreign aid is closer to a normal good, rather than a luxury good.

(b) Population Size

Despite arguments that larger countries can provide more assistance to developing countries simply due to their sizes, or since smaller ones can "free-ride" on larger ones (Dudley 1979; Mosley 1985), empirical results from most previous literature suggested a negative correlation between *population size* of donors and their aid volumes (Round and Odedokun 2004; Zimmerman 2007; Bertoli et al. 2008; Dreher and Fuchs 2011).

Round and Odedokun (2004) postulated the existence of economies of scale in providing aid: donors with larger population can take advantage of less administrative costs and lower monetary threshold, relative to their sizes. The negative impact of *population size* on aid volume was identified with all 22 donors examined in the study. Bertoli et al. (2008) argued that the relationship can be accounted for weaker willingness to redistribute based on higher heterogeneity and less cohesion within large populations.

(c) Economic Conditions

As mentioned earlier, a large number of studies on foreign aid had long focused on its effectiveness or allocation among recipient countries, while taking its amount within donor budgets as pre-determined by political and commercial interests (Faini 2006). Relatively a few have devoted attention to donors' economic conditions, including fiscal situation and macroeconomic constraints (Beenstock 1980; Round and Odedokun 2004; Faini 2006; Lundsgaarde et al. 2007; Bertoli et al. 2008). Governments experiencing heavier distress with fiscal balance were believed to be less generous to redistribution abroad (Round and Odedokun 2004), and in line with the belief, *debt* and *fiscal deficit* were identified as explanation for declining foreign aid (Faini 2006; Dreher and Fuchs 2011). Macroeconomic environments, such as *GDP growth rate*, *unemployment*, *output gap,* and *current account*, have also been expected to affect aid volume (Beenstock 1980; Round and Odedokun 2004; Faini 2006; Lundsgaarde et al. 2007; Bertoli et al. 2008; Tingley 2010), and Lundsgaarde et al. (2007) argued that economic conditions cause tradeoff between domestic and international priorities.

2.1.2. Political Factors

(a) Government Ideology

It has been generally acknowledged that right-wing governments tends to be less pro-poor domestically, and on the same lines, less generous in redistributing abroad (Round and Odedokun 2004; Fuchs et al. 2014). Left-leaning governments, on the other hand, are likely to exhibit higher donor generosity (Thérien and Noël 2000). This can be backed up by empirical results that discovered a negative correlation between *right-wing government ideology* and volume of foreign aid (Tingley 2010; Brech and Potrafke 2014). The opposite results, where being a right-wing government links to more commitments for foreign aid, were also identified

(Round and Odedokun 2004), which implies that development aid may have been used by right-wing governments as an instrument for political or commercial interests, "overshadowing" altruistic motivation of foreign aid (Round and Odedokun 2004; Fuchs et al. 2014).

(b) Diverging Interests in Domestic Politics

Not only whether a government is classified as right-wing or left-wing oriented, but also whether there are other political authorities that can exercise influence on decision making for aid allocation or not matters. Fuchs et al. (2014) and Round and Odedokun (2004) tried to weigh the impact of diverging interests in domestic politics by using indicators from the Database of Political Institutions 2001, such as indices of *polarization*, *checks and balances*, *government* and *opposition fractionalization* (Beck et al. 2001). The posited assumption was that the principle of checks and balances working around and/or within government would result in the reflection of diverging interests, which in turn increase budget allocation to foreign aid. Round and Odedokun (2004) found that the indicators, except opposition fractionalization, were effective in increasing aid volume of donors. The share of seats occupied by women in parliaments was also examined, and identified as a determinant of foreign aid, as Togeby (1994) argued that *women in parliament* tend to support increasing aid budget for international solidarity (Breuning 2001; Fuchs et al. 2014).

(c) Pro-poor Spending

Apart from the general perception that right-wing ideology provides less foreign aid, which can be diluted or regarded as ambiguous by strategic and economic interests, it has also been widely argued that governments in favor with domestic welfare and redistribution had higher propensity to redistribute abroad (Lumsdaine 1993; Noël and Thérien 1995). *Government size* that reflects the stance for domestic welfare was found to be positively associated with the scale

of development aid (Round and Odedokun 2004; Bertoli et al. 2008), while *social spending* proxied by nonrepayable subsidies and other transfers in relation to total government spending (Round and Odedokun 2004) or welfare expenditure as a share of GDP (Tingley 2010) showed a positive, but not statistically significant relationship. It was also discovered, however, that the link between public supports for domestic and international redistribution weakened, when the former took the top priority (Noël and Thérien 2002).

(d) Strategic Interests

Boschini and Olofsgård (2007), in a study on 17 OECD Development Assistance Committee (DAC) members for nearly 30 years from 1970 to 1997, found a positive correlation between foreign aid by donor countries and military expenditure made by the former Eastern Bloc countries. This provided a convincing answer to the question why aid volume significantly declined when Cold War ended in the 1990s, which suggested the loss of one of the important motivations for foreign aid. Round and Odedokun (2004) also argued that development aid is utilized in serving donors' strategic and military interests with empirical results using *military expenditure of donors as a share of GNI*, and *military personnel in relation to total labor force*. Fuchs et al. (2014) tried to examine whether aid served military interests of 22 DAC member countries with the 2 proxies, but found they were insignificant.

2.1.3. Social and Other Factors

(a) Domestic Inequality

Foreign aid can be regarded a public policy provided by governments of donor countries. Considering that governments, or donor agencies, are political system sourced by their taxpayers, the public, their policy decision making process should respond to demands and supply of the public, at least in principle. Therefore, it can be argued that foreign aid, like any

other public policies, would vary according to public opinions towards it. (Political systems around foreign aid and public support are discussed more closely in Chapter 3.) Mosley (1985) expected aid volume to decline with income inequality, since less equal societies are more unlikely to favor both domestic and international redistribution. Along with this postulation, Round and Odedokun (2004) and Bertoli et al. (2008) examined domestic inequality of donors using *Gini coefficient* and *income held by the bottom quintile of total population*, and found a negative relationship to foreign aid.

(b) Peer Effect

Round and Odedokun (2004) claimed that there is a strong evidence of peer pressure to be positively related to aid volume, which meant aid volume of a donor also increased or decreased along with those of other donors. Suggested causes were: multilateral aid provided jointly to international organizations including regional development banks and United Nations (UN) agencies; peer reviews among DAC member countries that enables collective improvement through recommendation and suggestions; and tendency to raise or reduce aid volume considering performances of other donors rather than focusing on mutual targets such as the 0.7% ODA/GNI ratio. This argument has been supported by recent studies including Fort and Santiso (2011) that described the *peer effect* as "herding" among donors. Fuchs et al. (2014), however, identified a negative impact of peer pressure on aid allocation, implying the existence of "free-ride" by individual donors on other donors' performance.

Table B. Determinants of Foreign Aid Identified in the Literature (Compiled by Author)

Potential determinants		Impact on aid volume observed		
		Positive or mixed positive	**Insignificant**	**Negative or mixed negative**
Economic factors	GDP per capita	Round and Odedokun (2004) Boschini and Olofsgård (2007) Bertoli et al. (2008) Dreher and Fuchs (2011) Fuchs et al. (2014)	Mosley (1985) Faini (2006) Lundsgaarde et al. (2007)	
	Population size		Fuchs et al. (2014)	Round and Odedokun (2004) Bertoli et al. (2008) Dreher and Fuchs (2011)
	Debt		Fuchs et al. (2014)	Faini (2006) Dreher and Fuchs (2011)
	Fiscal deficit		Mosley (1985) Round and Odedokun (2004) Boschini and Olofsgård (2007) Fuchs et al. (2014)	Faini (2006)
	GDP growth rate	Tingley (2010)	Lundsgaarde et al. (2007) Fuchs et al. (2014)	
	Output gap	Round and Odedokun (2004) Faini (2006)	Fuchs et al. (2014)	
	Unemployment		Boschini and Olofsgård (2007) Fuchs et al. (2014)	Beenstock (1980) Lundsgaarde et al. (2007)
	Current account	Beenstock (1980) Bertoli et al. (2008)	Fuchs et al. (2014)	

Political factors	Right-wing government ideology	Round and Odedokun (2004)	Faini (2006) Lundsgaarde et al. (2007) Fuchs et al. (2014)	Tingley 2010 Brech and Potrafke (2014)
	Polarization	Round and Odedokun (2004)	Fuchs et al. (2014)	
	Checks and balances	Round and Odedokun (2004)	Fuchs et al. (2014)	
	Government fractionalization	Round and Odedokun (2004)	Fuchs et al. (2014)	
	Opposition fractionalization		Fuchs et al. (2014)	Round and Odedokun (2004)
	Women in parliament	Breuning 2001 Fuchs et al. (2014)	Lundsgaarde et al. (2007)	
	Government size	Round and Odedokun (2004) Bertoli et al. (2008) Dreher and Fuchs (2011)	Fuchs et al. (2014)	
	Social spending	Round and Odedokun (2004) Tingley (2010)	Lundsgaarde et al. (2007) Fuchs et al. (2014)	
	Military expenditure / GNI ratio	Round and Odedokun (2004) Boschini and Olofsgård (2007)	Fuchs et al. (2014)	
	Military personnel / total labor force ratio	Round and Odedokun (2004)	Fuchs et al. (2014)	
Social and other factors	Income held by the bottom quintile of total population	Round and Odedokun (2004)	Fuchs et al. (2014)	
	Gini coefficient		Fuchs et al. (2014)	Round and Odedokun (2004) Bertoli et al. (2008)
	Peer effect	Round and Odedokun (2004)	Lundsgaarde et al. (2007) Bertoli et al. (2008)	Fuchs et al. (2014)

2.2. Literature on Transparency of Foreign Aid

What is transparency? According to Transparency International, an international NGO dedicated to combating corruption, transparency means openness. Transparency is enabling the public to be informed of activities of government, companies, or other organizations so as to secure their accountability and guard against corruption (Transparency International 2009). In a more practical sense, transparency is about disclosing information to the public on what has been done, for what purpose, by what method, and with how much resources.

Like other determinants of foreign aid described earlier in Section 2.1, transparency has also been discussed mainly on recipients' side. In terms of governance, lack of transparency or corruption in recipient countries was believed to interrupt effective use of foreign aid, since it leads to waste or diversion of the resources into activities that have less or even nothing to do with poverty reduction and economic development (World Bank 1991; Alesina and Dollar 2000; Santiso 2001; OECD 2005; Collier 2007). In this sense, therefore, most studies have looked at transparency as a donors' criterion for determining which developing countries should receive their limited foreign aid (Collier and Dollar 2001; Alesina and Weder 2002; Easterly 2007).

Transparency of foreign aid on donors' side has gained attention along with the discussion on aid effectiveness in the 2000s (Kaufmann 2009). A host of studies so far, however, have examined donor transparency, mostly as an element for improving aid effectiveness (Publish What You Fund 2009; Moon and Williamson 2010; Christensen et al. 2011; Gaventa and McGee 2013; McGee 2013).

Only a few examined the relationship between donors' transparency and their aid volume. Ghosh and Kharas (2011) pioneered the study of the effect of aid volume on donor transparency while ranking donors on transparency on their activities, although it was the opposite case of

this study. They examined the correlation between donor transparency and their aid volume, and identified that “no relationship” existed between the two factors. The correlation was rather weak at 0.11, which meant that larger donors are not necessarily more transparent.

It is also notable that Faust (2011) studied the relationship between donor transparency and their aid allocation pattern. The result showed that donors with higher political transparency not only engaged more in promoting aid transparency, but also allocated more aid that meets the need of recipients.

As described in the literature review earlier, there exists virtually no study that explored the impact of donor transparency on their aid volume, notwithstanding the fact that it is one of the few variables that donors can actually control. Most of the studies on aid allocation did not consider donors transparency as a determinant, although it seems fair considering that the discussion has been relatively new in the field of international development. Even the studies on donor transparency itself considered it only as one of the requisites for aid effectiveness. It can be acknowledged that there has been a lack of attempts to address how aid transparency of donors can work as a determinant of aid allocation within each donor country.

2.3. Literature on Aid Transparency Index

As the only measure of transparency performance of donor agencies, ATI is independently assessed based on IATI Standard. The main objectives of ATI are:

- Estimating aid transparency status of the major donor agencies;
- Tracking progress and encouraging peer learning, while holding donors accountable; and
- Raising awareness of aid transparency at international, regional, and national level, based on existing standards for promoting open data including International Aid Transparency Initiative (PWYF 2018).

ATI assesses all types of official development finance (ODF)[3] that includes ODA and other official flows (OOF) for development performed by bilateral donors, multilateral donors, and other donors including foundations, regional development banks, and UN agencies. In contrast to other international statistics or indicators, the subjects for assessment of ATI are donor "agencies", rather than donor countries. PWYF explains that the reason is mainly in order to consider different features of development aid within a country. It is impossible for any two agencies of a same country to be scored equally, since they should be different in approaches and performances of publication, as well as the size of aid.

The methodology of ATI measurement has been updated to monitor performances of donors more effectively, from its first publication in 2010 to the latest in 2018. After the first major revision made in 2012 based on consultation with donors and civil society, 39 indicators have been used in calculation for 4 consecutive editions from 2013 to 2016, until the second major update in 2017. The 39 indicators, mainly on how well donor agencies disclose information on their activities, were grouped into 3 categories: commitment to aid transparency, organization-level publication, and activity-level publication (For more details, refer to Appendix B.) The change in ATI measurements is summarized in Table C below.

Table C. Changes in Indicators and Assessed Agencies of ATI 2010-2018 (Compiled by Author from PWYF)

	2010	2011	2012	2013	2014	2015	2016	2018
Indicators measured	7	37	43	39	39	39	39	35
Donor agencies assessed	30	49	72	67	68	22	46	45

[3] OECD Glossary of Statistical Terms defines ODF as "used in measuring the inflow of resources to recipient countries: includes (a) bilateral official development assistance (ODA), (b) grants and concessional and non concessional development lending by multilateral financial institutions, and (c) Other Official Flows for development purposes (including refinancing Loans) which have too low a Grant Element to qualify as ODA." (OECD. Official Development Finance (ODF). https://stats.oecd.org/glossary/detail.asp?ID=1893)

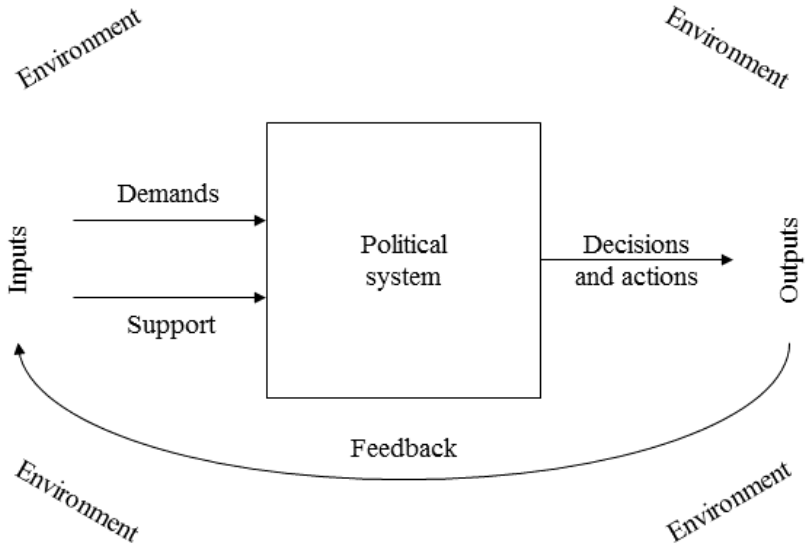
3. THEORETICAL BACKGROUND AND RESEARCH QUESTIONS

3.1. Systems Analysis on Foreign Aid

This study tries to apply the topic—whether aid transparency of donors has any effect on volume of their development aid—into a basic systems model developed by Easton (1965). The model has been used and highly regarded as a framework for diverse fields, organizations, and time periods. The model posits a policy decision-making structure of any society where its political system interacts with inputs, outputs, and feedbacks (Vaughan-Games 1987).

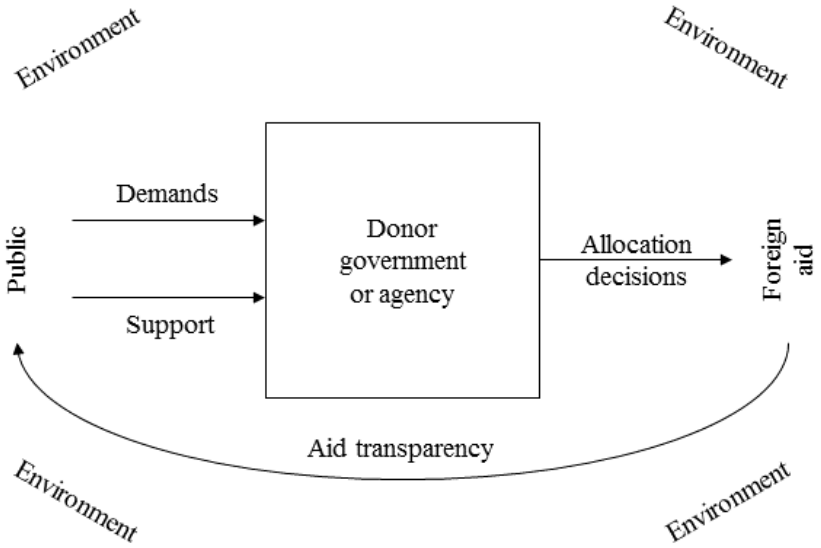
According to the model illustrated in Figure B below, a public policy is an output produced by decisions and actions of the political system that responds to inputs demanded by the society; and feedbacks on the policy formed by its success or failure again influence inputs of the next round that issue demands or support for the system; where this whole process is open and adaptive to intra- and extra-societal environments.

Figure B. Simplified Model of a Political System (Easton 1965)



When the model is applied into the political environment of aid donors, illustrated in Figure C below, foreign aid is a policy output, produced by allocation decisions of government or aid agency; and feedbacks, formed based on the performance of foreign aid, are given to the public that again provides demands and support to the government or aid agency; where the whole process interacts to intra- and extra-societal environments, such as motivations, ideology, interests, and preferences, which Easton believed to have significant influence on the entire scheme (Vaughan-Games 1987).

Figure C. Simplified Model of a Political System Applied to Foreign Aid Allocation (Modified by Author from Easton 1965)



Therefore, it can be acknowledged that donors' aid transparency—the extent to which donors disclose information on their aid activities—as feedback information to the public, can strengthen public support for subsequent activities. That is to say, with higher aid transparency, the public can trust that the government or aid agency is executing their tax in appropriate and understandable ways, which eventually provides more justification for increasing, or decreasing, of volume of foreign aid.

In addition to the common belief that transparency enhances public support, which was emphasized by numerous institutions including Transparency International and PWYF, there have been empirical researches that strengthens the reasoning. Gilens (2001) conducted a survey-based experiment on how the public holds different view about a certain policy depending on whether they are aware of specific information on policy or not. When respondents who had thought the government should "cut spending for foreign aid" were provided with the fact that the spending is less than 5%, their opposition fell by 13.6 percent points.

According to a survey of Program on International Policy Attitudes (PIPA), American citizens thought, in average, 10% of the government budget should be executed for foreign aid—which in fact was more than 10 times larger than actual spending. When informed of the fact, however, many of those who had believed that the government spent too much resources on foreign aid changed their initial stance (PIPA 2001).

3.2. Public Support for Foreign Aid

Based on the systems model applied into foreign aid allocation, higher transparency can provide stronger basis for supporting foreign aid policy of a society. However, does the enhanced public support result in decisions to allocate more budget to foreign aid? The argument on whether this link between public support for foreign aid and its volume exists or not has been discussed since the 1990s. (Kim et al. 2011)

3.2.1. Positive Linkage between Public Support and Foreign Aid

Lumsdaine (1993), based on the study on public opinions in 18 welfare states, claimed that foreign aid is not only based on strategic and economic interests, but also humanitarian interests called "moral vision"; and concluded that the public in favor with domestic redistribution

(social expenditure) also shows strong support for redistribution abroad (assistance to developing countries). Noël and Thérien (1995) backed up this claim by showing that governments with political orientation to domestic welfare are more committed in providing development assistance. Noël and Thérien (2002), in their subsequent study, found that attitudes of the public towards domestic and international redistribution are positively associated, only when considering a country's domestic political and institutional context; the coherence was sustained in countries with relatively equal income distribution, but when domestic income redistribution has greater priority, support for foreign aid was weaker.

Public opinions directly on foreign aid to developing world has also been argued to be positively influential to its amount. According to Randel and German (1996), it is more likely for developed countries, where public opinions on foreign aid are favorable, to make political decision to protect or increase their aid volume due to higher "political price." German et al. (1998) analyzed all DAC member countries, and based on the individual country studies, indicated that governments' decision making for aid allocation are influenced by public opinions towards international development cooperation.

Stern (1998) observed that countries with higher public support for foreign aid have bigger shares of aid among their total government budget, and claimed a positive correlation between them which appeared particularly strong with Northern European nations—Denmark, Norway, Netherlands, and Sweden. The survey on 21 donor countries showed that the public who supports development aid increased to 80% in 1995 from 78% in 1983, and based on the survey, Stern claimed that there is no predominant influence of "aid fatigue".

While examining the "paradox" that the international development cooperation community faced with at the end of a century where the confidence and the doubt in foreign aid exited at

the same time, Thérien and Lloyd (2000) assessed public opinions on development assistance within donor countries as possibly the most significant factor that can draw more aid in the future. It was also mentioned, however, that educating the public on development aid should be followed, as it is an essential requirement in mobilizing their support and achieving sustainable social and economic development for all global citizens.

3.2.2. Ambiguity in Linkage between Public Support and Foreign Aid

On the other hand, there also has been skepticism on the belief, argued by studies mentioned earlier, that aid allocation is influenced by what the public thinks. McDonnell (2002) refuted Stern's claim by arguing that public support for development aid towards developing world has been consistently high and remained stable. Based on the data collected from 13 OECD countries, the volume of development assistance in relation to their GNI has declined since the early 1990s. However, 80.4 percent of citizens in average has supported foreign aid, and there has been no aid fatigue observed "among the public", which implies that it perhaps only existed within political systems. McDonnell pointed out that the figure was no different from the average of 80% in 1995 (Stern 1998), which does not seem much higher than 78% in 1983.

Olsen (2001) also brought up questions to this "bottom-up" relationship. According to the case study on public opinions of five European donors, including Denmark, the European Union, France, Germany, and the United Kingdom, it was rather seen as a "top-down" relationship: in the 1990s, the five donors lowered their aid volume although over 70% of the public supported maintaining existing levels. Olsen attributed this "missing" or misinterpreted link to highly centralized political systems and highly polarized social structure.

Otter (2003) also studied trends in five donor countries, in attempt to explore the reason for the paradox, where donors decreased the level of providing foreign aid in spite of strong public

support. The relationship varied by country. Some cases demonstrated a positive correlation: aid volume increased or decreased in line with public support in Denmark and the United States; while others a negative or unclear correlation: aid size and public support varied in the opposite direction in Australia, Canada, and Japan. Otter concluded that there existed no definitive correlation based on the mixed results, and indicated that the reason can be decisions made with little consideration given to public opinions, in such "elite" realms as foreign aid.

More recently, Hudson and van Heerde (2009) examined the association of public support and the size of development assistance in OECD countries over the period from 1990 to 2007, and Lee (2010) conducted both cross-sectional and longitudinal analyses on 30 OECD countries including Republic of Korea, categorized into two groups by growth rate as an intervening variable from 1995 to 2008. Both reached to a conclusion of no convincing correlation found.

3.3. Questions to be Examined in This Study

Based on the theoretical background discussed above, this study aims to answer whether aid transparency performance of donor agencies functions as feedback information to the public that influences decision making of subsequent budget allocation for foreign aid; and if it does, how significant influence it retains among other determinants. In order to empirically examine the influence, therefore, this study attempts to address the following questions:

- What determines volume of foreign aid? Do factors that have been influential still apply to development assistance in recent years?
- Does aid transparency of donors influence volume of foreign aid? How significant is it compared to other determinants? Which component of donors' aid transparency performances is most influential?

4. METHODOLOGY

4.1. Model Specification

The baseline equation to examine determinants of foreign aid can be specified as:

$$y_{ijt} = \beta x_{ijt} + \mu_{ij} + \varepsilon_{ijt} \qquad (i = 1, 2, \ldots, 51; j = 1, 2, \ldots, 36; t = 1, 2, \ldots, 7)$$

where,

$i, j, t =$ donor agency, donor country, and year respectively;

$y =$ the dependent variable, the volume of donor agency's ODA in relation to donor country's GNI (ODA_{ijt} / GNI_{jt} ratio);

$x =$ the vector of explanatory variables, including economic, political, social and other factors, and aid transparency;

$\beta =$ the vector of explanatory variables' parameters;

$\mu, \varepsilon =$ unobserved individual effect; and error term.

As implied by the specification above, time-series cross-sectional data over the period of 2011-2017 are pooled across from 51 donor agencies in 36 donor countries. The data is unbalanced, however, since observations are not uniformly assembled for every donor agencies or years. Following the manner adopted by Round and Odedokun (2004), explanatory variables that are available for almost all organizations and years are included in equations repeatedly, while others which lack some observations are included in one equation at a time; in order to minimize possible multicollinearity and maximize observations for estimation (Round and Odedokun 2004). This study employs fixed effects regressions with the assumption of

unobserved time-invariant individual heterogeneity across donor agencies and years.

4.2. Data Measurements and Sources

This study analyzes the panel data of 51 donor agencies in 36 donor countries that have provided development aid from 2011 to 2017, and which amount of assistance provided was traceable and verifiable with OECD CRS. The list of donor agencies included is compiled in Appendix C, and all variables used in the analysis, with definitions and sources, in Table D.

4.2.1. Dependent Variable

In order to capture the volume of development aid made by each donor agency, the dependent variable was measured as the volume of net ODA disbursed by the agency as a share of the country's GNI (ODA_{ijt} / GNI_{jt} ratio). The ratio was calculated by Author's own calculation, based on the amount of ODA flow provided by individual donor agencies extracted from OECD CRS with Query Wizard for International Development Statistics (QWIDS) and GNI of each country collected from OECD IDS.

4.2.2. Explanatory Variables

Explanatory variables applied in this study are categorized into 4 groups: economic, political, social and other factors, and aid transparency. Economic factors were captured mostly from OECD IDS and World Bank WDI. GDP per capita, in the natural logarithmic form, was used as a proxy for income level of donor countries; log of total population for population size; and debt, fiscal deficit, GDP growth rate, output gap, unemployment, and current account for economic conditions of donor countries.

Most political factors, including government ideology, polarization, checks and balances, and fractionalization of government and opposition, were provided by IDB DPI 2017, while other

political factors, such as women in parliament, government size, social spending, and military expenditure and personnel were from OECD IDS and World Bank WDI. Gini coefficient and income held by the bottom quintile of total population, sourced from World Bank WDI, were used to estimate domestic inequality, while peer effect was also calculated by Author's own calculation, based on the method used by Fuchs et al. (2014): the average of ODA disbursements of all other donor agencies as a share of the country's GNI.

ATI datasets from 2013 to 2016, provided by PWYF, were used as a proxy of aid transparency performance of each donor agency. As described in Chapter 2, ATI for the observed period, has been composed of 3 categories, including commitment to aid transparency, organization-level publication, and activity-level publication. In addition to ATI itself as a whole, the 3 components were employed in the analysis respectively, in order to examine among different components of information disclosed by donor agencies, which one(s) have influence on the size of development aid.

Table D. Data Measurements and Sources (Compiled by Author)

Variables		Label	Definition (Format)	Source	URL
Dependent variable: Aid volume of donor agency		aid	A donor agency's net ODA disbursements, as a percentage of its donor countries gross national income (%)	Own calculation by Author based on OECD CRS & IDS	- https://stats.oecd.org/qwids - https://data.oecd.org/natincome/gross-national-income.htm
Economic factors	GDP per capita (log)	gdpc	A donor country's gross domestic product divided by its total population (natural logarithmic form)	World Bank WDI	https://data.worldbank.org/indicator/NY.GDP.PCAP.KD
	Population size (log)	pop	A donor country's total population (8natural logarithmic form)	World Bank WDI	https://data.worldbank.org/indicator/SP.POP.TOTL
	Debt	debt	A donor country's total gross government debt, as a percentage of its gross domestic product (%)	OECD IDS	https://data.oecd.org/gga/general-government-debt.htm
	Fiscal deficit	defic	A donor country's net lending or net borrowing, the fiscal position of government, as a percentage of its gross domestic product (%)	OECD IDS	https://data.oecd.org/gga/general-government-deficit.htm
	GDP growth rate	gdpg	A donor country's annual growth rate of gross domestic product, as a percentage (%)	World Bank WDI	https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG
	Output gap	gap	A difference between a donor country's actual gross domestic product (actual output) and long-term forecast of gross domestic product (potential output), as a percentage of the potential output (%)	Own calculation by Author based on OECD IDS	- https://data.oecd.org/gdp/real-gdp-long-term-forecast.htm - https://data.oecd.org/gdp/gross-domestic-product-gdp.htm
	Unemployment	unemp	A donor country's population unemployed but with capacity and willingness to work, as a percentage of total labor force (%)	World Bank WDI	https://data.worldbank.org/indicator/SL.UEM.TOTL.ZS
	Current account	curr	A sum of a donor country's foreign currency received and paid in trade of goods and services, as a percentage of its gross domestic product (%)	World Bank WDI	https://data.worldbank.org/indicator/BN.CAB.XOKA.GD.ZS

Political factors	Right-wing government ideology	idgy	A donor country's political orientation of government in economic policy, with categorization into: right-wing or conservative (1); centrist or unclear (0); and left-wing or socialist (-1)	IDB DPI 2017	https://publications.iadb.org/en/database-political-institutions-2017-dpi2017 (code: EXECRLC)
	Polarization	polar	A donor country's polarization between political parties, with categorization into: polarized political orientation between chief executive's party (president's party or prime minister's party) and other government parties (1-2); and no polarization with chief executive's party holding an absolute majority (0)	IDB DPI 2017	https://publications.iadb.org/en/database-political-institutions-2017-dpi2017 (code: POLARIZ)
	Checks and balances	check	A donor country's checks and balances within political decision-making process calculated by the number of veto powers (1-8)	IDB DPI 2017	https://publications.iadb.org/en/database-political-institutions-2017-dpi2017 (code: CHECKS)
	Government fractionalization	govfr	A donor country's fractionalization in government parties, with possibility of randomly selecting two lawmakers within government parties, who are actually each from different political parties (%)	IDB DPI 2017	https://publications.iadb.org/en/database-political-institutions-2017-dpi2017 (code: GOVFRAC)
	Opposition fractionalization	oppfr	A donor country's fractionalization in opposition parties, with possibility of randomly selecting two lawmakers within opposition parties, who are actually each from different political parties (%)	IDB DPI 2017	https://publications.iadb.org/en/database-political-institutions-2017-dpi2017 (code: OPPFRAC)
	Women in parliament	wipar	A donor county's number of seats occupied by women in domestic parliaments, as a percentage of total number of seats (%)	World Bank WDI	https://data.worldbank.org/indicator/SG.GEN.PARL.ZS
	Government size	gov	A donor country's total expenditure of central, state, and local governments, as a percentage of its gross domestic product (%)	OECD IDS	https://data.oecd.org/gga/general-government-spending.htm
	Social spending	subs	A donor country's government expenditure for social benefits including nonrepayable subsidies and other current transfers, as a percentage of its total expenditure	World Bank WDI	https://data.worldbank.org/indicator/GC.XPN.TRFT.ZS
	Military expenditure / GNI ratio	milex	A donor country's total expenditure on military activities, as a percentage of its gross domestic product (%)	World Bank WDI	https://data.worldbank.org/indicator/MS.MIL.XPND.GD.ZS

	Military personnel / total labor force ratio	milps	A donor country's number of military personnel, as a percentage of its total labor force (%)	World Bank WDI	https://data.worldbank.org/indicator/MS.MIL.TOTL.TF.ZS
Social and other factors	Income held by the bottom quintile of total population	poor	A donor country's income held by the bottom quintile population, as its total income or consumption, with duplication for previous or subsequent years (%)	World Bank WDI	https://data.worldbank.org/indicator/SI.DST.FRST.20
	Gini coefficient	gini	A donor country's Gini coefficient, as the degree of economic inequality, with duplication for previous or subsequent years (%)	World Bank WDI	https://data.worldbank.org/indicator/SI.POV.GINI
	Peer effect	peer	An average of net ODA disbursements of all other donor agencies except for the donor agency of concern, as a percentage of their gross national income (%)	Own calculation by Author based on OECD CRS	https://data.oecd.org/natincome/gross-national-income.htm
Aid transparency	Aid transparency	at	A donor agency's ATI as a whole index calculated by 39 indicators with different weights	PWYF ATI	https://www.publishwhatyoufund.org
	Commitments to aid transparency	atcom	A donor agency's ATI as a component of commitments for aid transparency, calculated by 3 indicators with the aggregate weight of 10%	PWYF ATI	https://www.publishwhatyoufund.org
	Publication – organization level	atpor	A donor agency's ATI as a component of organization-level publication, calculated by 8 indicators with the aggregate weight of 25%	PWYF ATI	https://www.publishwhatyoufund.org
	Publication – activity level	atpac	A donor agency's ATI as a component of activity-level publication, calculated by 28 indicators with the aggregate weight of 65%	PWYF ATI	https://www.publishwhatyoufund.org

5. RESULTS AND FINDINGS

The results of the fixed effects regressions on 51 donor agencies for 7 years from 2011 to 2017 are presented in Table E. As described earlier in Section 4.1, the 10 explanatory variables that are available for almost all aid agencies and years are included in Model 1 as a baseline model; while other variables lacking observations are included in each model at a time, from Model 2 to 19. The results find that most of the explanatory variables, which appear to have statistical significance in the results of the pooled OLS regression presented in Appendix D, turn insignificant in the fixed effects regressions. Nevertheless, the results identify some determining factors, and verifies influence of aid transparency on aid of donor agencies. An evaluation of the specific factors as determinants of foreign aid is provided below.

5.1. Economic Factors

Among economic factors, only population size and unemployment rate turn out to play significant roles in aid allocation within donors. Donors' income level, proxied by GDP per capita, which has been considered to have a positive correlation with aid volume, does not show any significance. This can be attributed to the specified model where individual country and time fixed effects are already considered, as Faini (2006) argued by the same result found with per capita income.

It appears that population size has negative impact on aid volume, showing significant negative correlations in every equation. This reconfirms the correlation between the size of country and aid volume, and the existence of economies of scale due to advantages of administrative costs and lower monetary threshold, as examined by previous literature (Round and Odedokun 2004; Bertoli et al. 2008; Dreher and Fuchs 2011).

There exist no signs that the factors representing donors' economic conditions, such as debt,

fiscal deficit, GDP growth rate, output gap, and current account, affect foreign aid. The exception is unemployment. Although having significance at the 0.05 level or below, unemployment shows a negative correlation with aid volume, in most cases except those considering aid transparency factors. The results suggest that governments with stronger burden of domestic unemployment provide less development assistance, implying the "tradeoff" between priorities that Lundsgaarde et al. (2007) argued.

5.2. Political Factors

Most of the political factors, including right-wing government ideology, diverging interests in domestic politics, and strategic interests, fail to prove their impact on aid volume. However, variables with thorough observations, which are included in the baseline model, demonstrates their presence around decision making process for foreign aid allocation.

Opposition fractionalization, or the number of political parties organizing the opposition party, is indicated as negatively correlated with foreign aid, with statistical significance in all models other than those considering aid transparency factors. This negative impact implies that it is more likely for the government to be less bothered by the fractionalized opposition, in making decisions for increasing donors' aid volume. Higher percentage of seats held by women lawmakers in domestic parliaments is positively related to aid volume, having significance at 0.05 level or below. The result seems to provide support for the argument that women are more likely to favor assistance for developing world, and their participation in politics increases donor generosity.

It is also examined that countries allocating more financial resources for pro-poor purposes provide more resources for developing countries as well. When employed with both government size and social spending as proxies for domestic pro-poor policy, the models

indicate positive correlations with international pro-poor tendency, while showing statistical significance in most cases.

5.3. Social and Other Factors

Regarding the link between domestic inequality of donors and their aid volume, the models employed this study provide unexpected results, conflicting to existing arguments made by previous literature, such as Round and Odedokun (2004) and Bertoli et al. (2008). The results of Model 11 and 12 contradict the perception that domestic inequality is inversely correlated to international redistribution. While both variables are statistically significant at 0.05 level at least, income held by the bottom quintile of total population shows a negative correlation, and Gini coefficient presents a positive correlation, which suggests that: relatively equal societies (with higher income share of the bottom quintile) provide less aid for redistribution abroad; or relatively inequal societies (with higher Gini coefficient) provide more.

Although peer effect has been detected, either positive or negative, by some of the existing studies, this study does not show convincing evidence of its existence. The impact of peer effect appears to be positive as expected in most cases, but statistically insignificant. Only in the case of employing 2-year lagged aid transparency (Model 15), peer effect turns significant at 0.05 level of significance, and negatively correlated with aid volume. Based on this result, it can be argued that development aid of a donor agency is negatively correlated with performance of peer agencies, implying negative spillovers among donors.

5.4. Aid Transparency

In respect to the question whether aid transparency of donor agencies has any influence on their aid volume, the result does not suggest significant evidence. Transparency factors of donors, which appear to be significant and positively correlated with aid volume in the results of the

pooled OLS regression compiled in Appendix D, turn insignificant with the fixed effects regressions. According to Model 13 and 14, ATI as a whole, as well as its 1-year lagged term, is barely influential to decisions on aid allocation, in contrast to the systems analysis model and its application to development aid described in Chapter 3. However, the 2-year lagged aid transparency shows a negative impact with significance at 0.05 level, although its degree appears to be small. This might represent that more frequent or cumulative exposure to publications and references related to foreign aid, instead of adequate food for thought, amplifies the misconception that inordinate amounts of taxpayers' money are being spent needlessly overseas.

When ATI is employed into the equation as its components, there are no significant findings as well. While the pooled OLS regressions provide positive and significant coefficients to all three components including commitments to aid transparency, organization-level publication, and activity-level publication, the fixed effects regressions do not present the same relationship between disclosing information on aid activities of donors and raising their volume.

These results provide stronger support to the argument claimed by previous literature mentioned in Chapter 3, that the link between stronger public support for development assistance and decisions to allocate more resources to foreign aid by political systems is indistinct (Olsen 2001; Otter 2003; Hudson and van Heerde 2009; Lee 2010). The postulation of the role of aid transparency as provision of feedback information to the public also cannot be proved by the empirical analysis of this study.

Table E. Regression Results of Fixed Effects Model (Compiled by Author)

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
gdpc	-0.190	-0.233	-0.211	-0.132	-0.176	-0.163	-0.156	-0.190	-0.144	-0.191
	(0.179)	(0.250)	(0.186)	(0.250)	(0.186)	(0.209)	(0.181)	(0.179)	(0.185)	(0.179)
pop	-0.811**	-0.900**	-0.813**	-0.869*	-0.837**	-0.849**	-0.819**	-0.814**	-0.914***	-0.811**
	(0.321)	(0.371)	(0.342)	(0.481)	(0.335)	(0.375)	(0.321)	(0.325)	(0.339)	(0.322)
gdpg	-0.000363	0.000787	5.54e-05	0.00171	-0.000646	-0.000623	-0.000690	-0.000350	-0.000491	-0.000359
	(0.00246)	(0.00266)	(0.00254)	(0.00280)	(0.00257)	(0.00270)	(0.00248)	(0.00248)	(0.00247)	(0.00247)
unemp	-0.00845**	-0.0104**	-0.00951**	-0.00707	-0.00859**	-0.00854*	-0.00764*	-0.00843**	-0.00670	-0.00842**
	(0.00424)	(0.00479)	(0.00448)	(0.00549)	(0.00434)	(0.00481)	(0.00429)	(0.00426)	(0.00462)	(0.00427)
curr	-0.00162	-0.00346	-0.00205	-0.00612	-0.00161	-0.00216	-0.00172	-0.00161	-0.00202	-0.00165
	(0.00272)	(0.00325)	(0.00320)	(0.00402)	(0.00286)	(0.00318)	(0.00272)	(0.00273)	(0.00275)	(0.00276)
oppfr	-0.0998**	-0.0908*	-0.0907**	-0.138**	-0.0904*	-0.100**	-0.0847*	-0.101**	-0.0975**	-0.100**
	(0.0445)	(0.0473)	(0.0457)	(0.0606)	(0.0491)	(0.0501)	(0.0459)	(0.0495)	(0.0446)	(0.0451)
wipar	0.00310*	0.00359*	0.00332*	0.00275	0.00299*	0.00329*	0.00331**	0.00311*	0.00295*	0.00308*
	(0.00166)	(0.00189)	(0.00170)	(0.00241)	(0.00176)	(0.00194)	(0.00167)	(0.00167)	(0.00167)	(0.00168)
gov	0.00584**	0.00754**	0.00553	0.00878***	0.00583**	0.00699**	0.00589**	0.00583**	0.00584**	0.00583**
	(0.00251)	(0.00328)	(0.00348)	(0.00318)	(0.00260)	(0.00290)	(0.00251)	(0.00252)	(0.00251)	(0.00252)
subs	0.00338	0.00788**	0.00936***	0.00900**	0.00334	0.00806**	0.00415*	0.00338	0.00304	0.00338
	(0.00218)	(0.00363)	(0.00336)	(0.00363)	(0.00225)	(0.00331)	(0.00226)	(0.00219)	(0.00221)	(0.00219)
peer	0.215	0.357	0.255	0.352	0.237	0.348	0.244	0.212	0.201	0.217
	(0.223)	(0.278)	(0.238)	(0.260)	(0.233)	(0.263)	(0.224)	(0.227)	(0.224)	(0.224)
debt		8.79e-05								
		(0.000630)								
defic			-0.00303							
			(0.00385)							
gap				0.00149						
				(0.00190)						
idgy					-0.00361					
					(0.00656)					
polar						-0.00565				
						(0.00817)				
check							-0.00860			
							(0.00641)			
govfr								-0.00308		
								(0.0417)		
milex									-0.0198	
									(0.0208)	
milps										-0.00376
										(0.0528)
Constant	15.56***	17.26***	15.51***	15.55**	15.90***	15.77***	15.32***	15.63***	16.88***	15.57***
	(5.169)	(6.236)	(5.503)	(7.465)	(5.413)	(5.920)	(5.175)	(5.256)	(5.351)	(5.181)
Observations	305	274	288	251	292	264	304	305	305	305
R-squared	0.160	0.188	0.181	0.162	0.166	0.181	0.166	0.160	0.163	0.160
Number of id	49	42	44	45	47	43	49	49	49	49

VARIABLES	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
gdpc	-0.0631	-0.0875	0.514	0.140	-0.977	0.490	0.465	0.498	0.514
	(0.190)	(0.190)	(0.403)	(0.349)	(0.649)	(0.398)	(0.411)	(0.398)	(0.412)
pop	-1.190***	-1.196***	-2.966**	-2.888***	-2.856***	-3.110***	-3.022**	-3.020***	-3.136***
	(0.366)	(0.373)	(1.138)	(0.716)	(0.930)	(1.136)	(1.145)	(1.131)	(1.147)
gdpg	-0.000719	-0.000730	0.00409	-0.00252	0.00387	0.00392	0.00418	0.00444	0.00429
	(0.00258)	(0.00259)	(0.00587)	(0.00332)	(0.00311)	(0.00584)	(0.00592)	(0.00585)	(0.00593)
unemp	-0.00779*	-0.00788*	-0.000532	-0.00980	-0.0221	-0.00169	-0.00103	-0.00127	-0.00227
	(0.00436)	(0.00438)	(0.00903)	(0.00829)	(0.0139)	(0.00902)	(0.00916)	(0.00899)	(0.00919)
curr	-0.00257	-0.00158	-0.00309	0.00670	-0.0118*	-0.00426	-0.00451	-0.00257	-0.00229
	(0.00284)	(0.00283)	(0.00651)	(0.00476)	(0.00652)	(0.00616)	(0.00632)	(0.00640)	(0.00657)
oppfr	-0.0970**	-0.0961**	-0.0846	0.0632	0.0464	-0.0805	-0.0855	-0.0724	-0.0633
	(0.0461)	(0.0463)	(0.0903)	(0.126)	(0.138)	(0.0900)	(0.0913)	(0.0911)	(0.0928)
wipar	0.00357**	0.00400**	0.0112**	0.00414**	0.00137	0.0107**	0.0109**	0.0108**	0.0105**
	(0.00172)	(0.00175)	(0.00493)	(0.00195)	(0.00298)	(0.00491)	(0.00499)	(0.00491)	(0.00499)
gov	0.00537**	0.00631**	0.0209***	0.0130**	0.00803	0.0211***	0.0204***	0.0212***	0.0220***
	(0.00265)	(0.00264)	(0.00665)	(0.00573)	(0.00861)	(0.00661)	(0.00664)	(0.00663)	(0.00672)
subs	0.00315	0.00361	0.0253***	0.0146**	-0.000146	0.0261***	0.0251***	0.0256***	0.0269***
	(0.00226)	(0.00228)	(0.00782)	(0.00705)	(0.00893)	(0.00785)	(0.00784)	(0.00780)	(0.00793)
peer	0.260	0.224	0.615	0.574	-3.200**	0.422	0.493	0.671	0.599
	(0.243)	(0.242)	(0.454)	(0.432)	(1.403)	(0.421)	(0.421)	(0.445)	(0.456)
poor	-0.0755***								
	(0.0279)								
gini		0.0206**							
		(0.00885)							
at			0.000446						
			(0.000755)						
at_1				1.92e-05					
				(0.000640)					
at_2					-0.00147**				
					(0.000629)				
atcom						-0.00476			-0.00533
						(0.00475)			(0.00494)
atpor							-0.000306		0.000110
							(0.00163)		(0.00168)
atpac								0.000891	0.000985
								(0.000893)	(0.000903)
Constant	21.22***	20.26***	43.25**	46.69***	59.35***	46.02**	44.82**	44.31**	46.10**
	(5.804)	(5.785)	(18.76)	(11.55)	(18.88)	(18.69)	(18.98)	(18.60)	(18.99)
Observations	285	285	123	130	104	123	123	123	123
R-squared	0.186	0.179	0.368	0.430	0.372	0.374	0.366	0.374	0.385
Number of id	46	46	43	46	46	43	43	43	43

6. CONCLUSION AND IMPLICATIONS

By claiming that ODA is "dying", Severino and Ray (2009) called upon the international development cooperation community to move from ODA to a new measurement of financial resources to fight global challenges. The claim seems to be soon supported by the emergence of new frameworks, such as total official support for sustainable development (TOSSD) which emphasizes the importance of mobilizing finances from unconventional sources. Nevertheless, ODA is remaining as a fundamental source of development financing, and expected to play significant roles also in the era of SDGs (ECOSOC 2016).[4] This suggests that it is still important to explore the factors that affect the volume of development assistance.

This study is an effort to verify determinants of foreign aid provided by donor agencies over the period of 2011-2017, including aid transparency which has been scarcely investigated as a determinant in earlier studies. The results confirm that some factors that were regarded as determinants of aid volume by previous literature still apply in the aid allocation within donor countries: population size, unemployment, diverging interests in parliaments, and pro-poor tendency are identified to have expected influences; while economic inequality in donors to contradict the expectation.

Aid transparency of donor agencies, which is the major focus of this study, turns out to make little or no impact on their development aid. This result implies that aid transparency—or disclosing information on foreign aid—is not performing a role as feedback information to the

[4] At the 11th Seoul ODA International Conference, Thomas Gass, Assistant Secretary-General for Policy Coordination and Inter-Agency Affairs of the United Nations, highlighted six areas that ODA can be utilized more strategically in implementing SDGs including: long-term capacity building in developing countries; achieving accordance among different agendas; correcting market failures and unbalanced opportunities; catalyzing other financial sources; and supporting accountability and enhancing impact of partnerships. (The Future of International Development Cooperation: The Role of ODA in the Era of the Sustainable Development Goals. https://www.un.org/development/desa/statements/asg/mr-gass/2017/09/11th-seoul-oda-intl-conf.html.)

public well, which was described earlier in Chapter 3. Furthermore, it can also be argued that enhanced aid transparency of donor agencies strengthens misunderstanding of the public, and persuade decision makers to spare less budget, as shown in by the result of Model 15.

As one of the first attempts to examine aid transparency of donor agencies as a determinant of foreign aid volume, this study leaves much for future studies. Due to its newness and continued improvements in measurements, only 4 years of observations on ATI from 2013 to 2016, which share the same 39 component indicators in common, are available, and used for analysis. Once more data is accumulated and more attention is given to ATI, its impact on aid volume can be clearly revealed. In addition, public support and aid quality are recommended to be investigated as separate variables in further analysis. There might exists an interaction effect among them: quality aid might positively relate with aid transparency to lead greater levels of budget allocation, whereas raised transparency of subpar aid might only persuade the public and other decision makers to reduce funding.

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APPENDICES

Appendix A. Summary of Descriptive Statistics (Compiled by Author)

Variable	Observations	Mean	Standard Deviation	Min	Max
id	357	26	14.74026	1	51
year	357	2014	2.002807	2011	2017
aid	317	0.15388	0.229135	0	0.99
gdpc_ln	356	10.45804	0.545817	8.856401	11.58506
pop_ln	357	16.81121	1.663337	12.93908	19.59979
debt	296	98.61269	47.77939	1.893522	238.1824
defic	308	-2.82902	3.713832	-14.6786	13.83138
gdpg	357	2.116106	2.346155	-9.13249	25.11725
gap	270	8.015595	4.25933	-2.63608	19.64126
unemp	345	8.149367	4.77933	1.635502	27.4662
curr	343	0.9622	4.378414	-9.93158	13.32184
idgy	343	0.180758	0.846031	-1	1
polar	303	1.270627	0.923943	0	2
check	354	4.062147	1.361794	1	8
govfr	343	0.440702	0.239852	0	0.806423
oppfr	357	0.315578	0.257029	0	0.824415
wipar	357	24.89132	9.94857	7.9	44.7
gov	356	32.80324	11.08809	3.895282	60.39658
subs	356	56.9236	15.16173	14.95139	83.87896
milex	351	1.758212	1.054199	0.3407	6.034686
milps	357	0.90934	0.588858	0.31569	2.993491
poor	322	7.36677	1.326033	4.9	9.7
gini	322	33.00062	4.149796	24.9	41.5
peer	357	0.155404	0.027225	0.107079	0.19594
at	134	36.09683	23.37808	0	89.6
at_1	134	36.09683	23.37808	0	89.6
at_2	108	32.69722	22.75327	0	88.9
atcom	133	4.503759	2.328818	0	9.8
atpor	133	10.55508	5.723194	1.25	24.81989
atpac	133	21.30624	16.74082	0	63.1

Appendix B. Indicators, Grouping, and Scoring Approach of ATI 2013-2016 (PWYF 2013)

Category	Sub-category	Indicator name	Scoring approach	Weight
Commitment to aid transparency	Commitment	1. Quality of FOI legislation (FOIA)	Graduated based on the score given in Right To Information (RTI) Rating (see: http://www.rti-rating.org/). The complete approach to assessing and scoring FOIA and disclosure policy quality can be found in the technical paper available online.	3.33%
		2. Implementation schedules	Graduated based on the total score received out of 100 based on analysis of Busan common standard/IATI implementation schedules.	3.33%
		3. Accessibility	Graduated based on three criteria: allows free bulk export of data; provides disaggregated, detailed data on activities; and data is released under an open licence. Each criterion carries 33.33% of the total possible score on this indicator.	3.33%
Publication – Organisation level	Planning	4. Strategy	Graduated based on accessibility	2.50%
		5. Annual report	Graduated based on accessibility	2.50%
		6. Allocation policy	Graduated based on accessibility	2.50%
		7. Procurement policy	Graduated based on accessibility	2.50%
		8. Strategy (country)	Graduated based on accessibility	2.50%
	Financial	9. Total organisation budget	Graduated based on format and number of years for which data is provided	4.17%
		10. Disaggregated budget	Graduated based on format and number of years for which data is provided	4.17%
		11. Audit	Graduated based on accessibility	4.17%
Publication – Activity level	Basic activity information	12. Implementer	Graduated based on format	1.63%
		13. Unique ID	Graduated based on format	1.63%
		14. Title	Graduated based on format	1.63%
		15. Description	Graduated based on format	1.63%

		16. Planned dates	Graduated based on format	1.63%
		17. Actual dates	Graduated based on format	1.63%
		18. Current status	Graduated based on format	1.63%
		19. Contact details	Graduated based on format	1.63%
	Classifications	20. Collaboration type	Graduated based on format	1.86%
		21. Flow type	Graduated based on format	1.86%
		22. Aid type	Graduated based on format	1.86%
		23. Finance type	Graduated based on format	1.86%
		24. Sectors	Graduated based on format	1.86%
		25. Sub-national location	Graduated based on format	1.86%
		26. Tied aid status	Graduated based on format	1.86%
	Related documents	27. Memorandum of Understanding (MoU)	Graduated based on accessibility	2.17%
		28. Evaluations	Graduated based on accessibility	2.17%
		29. Objectives	Graduated based on accessibility	2.17%
		30. Budget docs	Graduated based on accessibility	2.17%
		31. Contracts	Graduated based on accessibility	2.17%
		32. Tenders	Graduated based on accessibility	2.17%
	Financial	33. Overall cost	Graduated based on format	3.25%
		34. Planned expenditures	Graduated based on format	3.25%
		35. Actual expenditures	Graduated based on format	3.25%
		36. Budget Identifier (Budget ID)	Graduated based on format	3.25%
	Performance	37. Results	Graduated based on format	4.33%
		38. Impact appraisals	Graduated based on accessibility	4.33%
		39. Conditions	Graduated based on accessibility	4.33%

Appendix C. Donor Agencies Included in Analysis (Compiled by Author)

	Country	Agency
1	Australia	Department of Foreign Affairs and Trade (former Australian Agency for International Development)
2	Austria	Austrian Development Agency
3	Belgium	Directorate General for Cooperation and Development
4	Bulgaria	Ministry of Foreign Affairs
5	Canada	Global Affairs Canada (former Department of Foreign Affairs, Trade and Development, and Canadian International Development Agency)
6	Cyprus	CyprusAid
7	Czech Republic	Czech Development Agency
8	Denmark	Ministry of Foreign Affairs
9	Estonia	Ministry of Foreign Affairs
10	Finland	Ministry of Foreign Affairs
11	France	French Development Agency
12	France	Ministry of Foreign Affairs
13	France	Ministry of Economics, Finance and Industry
14	Germany	GIZ
15	Germany	KfW
16	Germany	Federal Foreign Office
17	Greece	HellenicAid
18	Hungary	Ministry of Foreign Affairs
19	Ireland	Irish Aid
20	Italy	Ministry of Foreign Affairs (former Direzione Generale per la Cooperazione allo Sviluppo)
21	Japan	Japan International Cooperation Agency
22	Japan	Ministry of Foreign Affairs
23	Korea	Economic Cooperation Development Fund
24	Korea	Korea International Cooperation Agency
25	Latvia	Ministry of Foreign Affairs
26	Lithuania	Ministry of Foreign Affairs

27	Luxembourg	Ministry of Foreign Affairs
28	Malta	Ministry of Foreign Affairs
29	Netherlands	Ministry of Foreign Affairs
30	New Zealand	Ministry of Foreign Affairs and Trade
31	Norway	Ministry of Foreign Affairs
32	Poland	Ministry of Foreign Affairs
33	Portugal	Portuguese Institute for Development Assistance
34	Romania	Ministry of Foreign Affairs
35	Slovakia	Slovak Agency for International Development Cooperation
36	Slovenia	Ministry of Foreign Affairs
37	Spain	Spanish Agency for International Development Cooperation
38	Spain	Ministry of Foreign Affairs and Cooperation
39	Sweden	Ministry of Foreign Affairs - Swedish International Development Cooperation Agency
40	Switzerland	Swiss Agency for Development and Cooperation
41	United Arab Emirates	Department of Finance
42	United Arab Emirates	Ministry of Foreign Affairs
43	United Kingdom	Department for International Development
44	United Kingdom	Department of Energy and Climate Change
45	United Kingdom	Foreign and Commonwealth Office
46	United Kingdom	Ministry of Defence
47	United States	Department of Defense
48	United States	Department of State (INL Bureau)
49	United States	Department of the Treasury (Office of Technical Assistance)
50	United States	Millennium Challenge Corporation
51	United States	U.S. Agency for International Development

Appendix D. Regression Results of Pooled OLS (Compiled by Author)

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
gdpc	0.256***	0.315***	0.313***	0.313***	0.282***	0.332***	0.253***	0.262***	0.255***	0.265***
	(0.0203)	(0.0238)	(0.0219)	(0.0226)	(0.0213)	(0.0265)	(0.0207)	(0.0207)	(0.0203)	(0.0216)
pop	-0.0641***	-0.0756***	-0.0703***	-0.0777***	-0.0672***	-0.0652***	-0.0669***	-0.0613***	-0.0703***	-0.0641***
	(0.00809)	(0.0105)	(0.00933)	(0.00843)	(0.00811)	(0.00892)	(0.00887)	(0.00830)	(0.00922)	(0.00808)
gdpg	-0.00927**	-0.0111**	-0.0111***	-0.00731*	-0.0116***	-0.0128***	-0.00976**	-0.00886**	-0.00916**	-0.00797*
	(0.00424)	(0.00437)	(0.00418)	(0.00414)	(0.00434)	(0.00434)	(0.00430)	(0.00424)	(0.00423)	(0.00436)
unemp	-0.00753***	-0.00633***	-0.00444*	-0.00530**	-0.00689***	-0.00727***	-0.00759***	-0.00784***	-0.00739***	-0.00823***
	(0.00211)	(0.00244)	(0.00238)	(0.00214)	(0.00211)	(0.00211)	(0.00212)	(0.00212)	(0.00211)	(0.00218)
curr	0.00749***	0.00636**	0.00551**	0.00903***	0.00820***	0.00985***	0.00723***	0.00605**	0.00811***	0.00659***
	(0.00225)	(0.00254)	(0.00256)	(0.00228)	(0.00226)	(0.00235)	(0.00228)	(0.00245)	(0.00229)	(0.00236)
oppfr	-0.0738	-0.157***	-0.134**	-0.113**	-0.0413	-0.105*	-0.0871*	-0.0744	-0.0665	-0.0629
	(0.0491)	(0.0560)	(0.0533)	(0.0545)	(0.0506)	(0.0555)	(0.0524)	(0.0490)	(0.0493)	(0.0498)
wipar	0.00447***	0.00447***	0.00363***	0.00478***	0.00386***	0.00598***	0.00439***	0.00426***	0.00469***	0.00494***
	(0.00111)	(0.00139)	(0.00114)	(0.00118)	(0.00112)	(0.00125)	(0.00112)	(0.00112)	(0.00112)	(0.00117)
gov	-0.00155	-0.00133	-0.00148	-0.00101	-0.00255**	-0.00172	-0.00174	-0.00188*	-0.00173	-0.00181
	(0.00108)	(0.00111)	(0.00109)	(0.00108)	(0.00113)	(0.00120)	(0.00111)	(0.00110)	(0.00109)	(0.00110)
subs	-0.00235***	-0.00249***	-0.00251***	-0.00227***	-0.00227***	-0.00284***	-0.00225***	-0.00256***	-0.00218***	-0.00232***
	(0.000798)	(0.000798)	(0.000790)	(0.000825)	(0.000794)	(0.000849)	(0.000811)	(0.000809)	(0.000807)	(0.000798)
peer	0.324	0.298	0.579*	-0.919**	0.385	0.552	0.317	0.357	0.310	0.374
	(0.326)	(0.351)	(0.337)	(0.407)	(0.328)	(0.340)	(0.327)	(0.326)	(0.326)	(0.328)
debt		-0.000258								
		(0.000282)								
defic			0.00747**							
			(0.00359)							
gap				-0.0123***						
				(0.00257)						
idgy					0.00607					
					(0.00973)					
polar						-0.0210				
						(0.0131)				
check							0.00598			
							(0.00779)			
govfr								0.0672		
								(0.0453)		
milex									0.0184	
									(0.0132)	
milps										0.0231
										(0.0185)
Constant	-1.336***	-1.720***	-1.824***	-1.452***	-1.537***	-2.131***	-1.277***	-1.452***	-1.267***	-1.468***
	(0.257)	(0.318)	(0.290)	(0.279)	(0.263)	(0.350)	(0.269)	(0.268)	(0.261)	(0.278)
Observations	305	274	288	251	292	264	304	305	305	305
R-squared	0.629	0.673	0.676	0.712	0.651	0.688	0.629	0.632	0.631	0.631

VARIABLES	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
gdpc	0.241***	0.247***	0.246***	0.181***	0.137***	0.243***	0.252***	0.250***	0.241***
	(0.0213)	(0.0221)	(0.0386)	(0.0316)	(0.0304)	(0.0382)	(0.0396)	(0.0390)	(0.0383)
pop	-0.0739***	-0.0704***	-0.0858***	-0.0721***	-0.0567***	-0.0796***	-0.0845***	-0.0860***	-0.0820***
	(0.00911)	(0.00946)	(0.0150)	(0.0127)	(0.0129)	(0.0147)	(0.0154)	(0.0151)	(0.0149)
gdpg	-0.00669	-0.00741	0.00236	-0.00911	-0.00276	0.00236	0.00155	0.00463	0.00175
	(0.00451)	(0.00452)	(0.0111)	(0.00562)	(0.00558)	(0.0109)	(0.0115)	(0.0111)	(0.0111)
unemp	-0.0107***	-0.00862***	-0.00792**	-0.00758**	-0.00539	-0.00750**	-0.00960**	-0.00803**	-0.00714*
	(0.00262)	(0.00250)	(0.00381)	(0.00358)	(0.00374)	(0.00377)	(0.00387)	(0.00385)	(0.00380)
curr	0.00748***	0.00634**	0.00987**	0.00828**	0.00549	0.0104***	0.00828**	0.00939**	0.0108***
	(0.00251)	(0.00255)	(0.00384)	(0.00349)	(0.00358)	(0.00380)	(0.00389)	(0.00387)	(0.00382)
oppfr	-0.114**	-0.111**	-0.151*	-0.0568	-0.0736	-0.146*	-0.164*	-0.153*	-0.143*
	(0.0528)	(0.0533)	(0.0869)	(0.0730)	(0.0753)	(0.0858)	(0.0891)	(0.0878)	(0.0860)
wipar	0.00719***	0.00609***	0.00422*	0.00327*	0.00250	0.00443**	0.00563**	0.00463**	0.00382*
	(0.00150)	(0.00149)	(0.00217)	(0.00188)	(0.00185)	(0.00210)	(0.00216)	(0.00218)	(0.00216)
gov	-0.000599	-0.00138	0.00142	0.00104	0.000615	0.00102	0.000569	0.00118	0.00147
	(0.00126)	(0.00124)	(0.00189)	(0.00175)	(0.00184)	(0.00183)	(0.00191)	(0.00190)	(0.00187)
subs	-0.00269***	-0.00249***	-0.00115	-0.000577	0.000110	-0.00128	-0.00164	-0.00107	-0.00114
	(0.000824)	(0.000820)	(0.00118)	(0.00109)	(0.00111)	(0.00117)	(0.00121)	(0.00120)	(0.00118)
peer	0.544	0.396	0.671	0.794	-10.89***	0.623	0.0943	0.753	0.766
	(0.362)	(0.361)	(0.559)	(0.817)	(2.528)	(0.547)	(0.554)	(0.576)	(0.585)
poor	-0.0186*								
	(0.0112)								
gini		0.000588							
		(0.00351)							
at			0.00304***						
			(0.000777)						
at_1				0.00310***					
				(0.000720)					
at_2					0.00137*				
					(0.000762)				
atcom						0.0303***			0.0229**
						(0.00705)			(0.00936)
atpor							0.00839***		0.000717
							(0.00287)		(0.00371)
atpac								0.00383***	0.00158
								(0.00108)	(0.00147)
Constant	-0.970***	-1.196***	-1.178**	-0.755*	0.961*	-1.265**	-1.111**	-1.206**	-1.243**
	(0.303)	(0.273)	(0.543)	(0.414)	(0.511)	(0.537)	(0.559)	(0.549)	(0.540)
Observations	285	285	123	130	104	123	123	123	123
R-squared	0.642	0.639	0.701	0.662	0.697	0.708	0.684	0.694	0.713