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Norway's Aid-for-Trade Allocation: Is It Based on Recipient Countries' Needs and Policy Merits, or Norway's Trade Interests?

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Abstract

Facilitating trade has been suggested as a tool for the economic development in poorer countries. However, developing countries are still struggling to integrate into world trade. The purpose of aid-for-trade is to improve the interests and access of developing countries to international markets. The previous literature on the provision of general aid suggests that aid is most effective when allocated while taking into consideration the recipient's needs as well as merits of the recipient based on the quality of its policies.

This thesis examines whether recipients' needs, the quality of recipients' policies, or the donor's own export interests explain the allocation of aid-for-trade funds in the case of Norway. A panel data set of 113 recipient countries during 2005-2014 is analyzed by estimating a fixed effects model, a random effects model, and a Tobit model. In addition, the data set is used to perform qualitative analysis that groups recipients into aid-recipient types according to high/low per capita GDP, good/poor implementation and enforcement of the rule of law, voice and accountability, and trade openness.

The results show that the motivations suggested in the literature that explain the allocation of general aid do not explain Norway's allocation of aid-for-trade funds. Only democracy and human rights is a statistically significant factor in affecting allocation decisions. Supplementary qualitative analysis showed that democracy and human rights levels are more important in decision-making when the recipients being considered are those with relatively higher per capita income levels. The estimation results provide no compelling evidence to suggest that Norway systematically allocated aid-for-trade by considering the per capita income level of recipients. Nevertheless, relatively poorer recipients seem to be prioritized for aid allocation by Norway based on average values of the aid provided. Moreover, there is no consistent evidence found that aid-for-trade is allocated by taking into account the level of institutional quality and the degree of trade openness. Finally, there is also no evidence found that Norway pursues its economic interests while allocating aid. Further research should be undertaken to provide more insight into the decision-making process for the allocation of aid-for-trade funds and to understand how the motivations might work differently to the decision-making that governs the allocation of general aid.

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Chapter 1. Introduction

The concept of Official Development Assistance (ODA) goes back to the early 1960s with the establishment of Development Assistance Committee in 1961 by the Organization for Economic Cooperation and Development (OECD). DAC was organized as a forum for consultations among donors on assistance to developing countries (Hynes & Scott 2013). ODA is defined by the OECD as resource flows provided by official agencies for the promotion of the economic development and welfare of developing countries (OECD 2016a). Developing countries received nearly \$3 trillion of ODA since 1960. Despite receiving large amounts of aid, the least developed countries are still facing challenges to development. Since 2000, the least developed countries received 7.2% of their GDP as development aid, yet the average annual growth rate was 6.43% during the same period until 2014.¹

Facilitating trade has been suggested as an alternative to aid as a tool for development. The theory supports that the openness of an economy can have a positive effect on its growth. Frankel and Romer (1999) argued that the integration of a country into the global trading system can be a driving force for economic development and can lead to the convergence of income across countries. Even though this development is possible in theory, dealing with the higher costs of trading that developing countries face is a challenge for integrating into the global market. The average cost of export for the least developed countries amounted to \$1817 per container between 2005 and 2014 while the average cost was nearly half (\$929) for high-income countries.² The export values of LDCs to the world have increased by an average annual growth rate of 10% between 2005 and 2015. However, the share of LDC exports was less than 1% of the total world exports in the same period despite the population living in LDCs making up 12% of the world population.³ On the other hand, the BRICS (Brazil, Russia, India, China and South Africa) economies have increased their share of world exports from 8% in 2000 to 19% in 2014 (WTO 2015).

Considering the limitations in international trade such as lack of knowledge, inefficient financing and poor infrastructure, a comprehensive multilateral trade negotiation started at the WTO's Fourth Ministerial Conference in 2001, launching the Doha Development Round with the purpose of improving the interests and access of developing countries to international

¹ Calculated with data from the World Bank (2016a; 2016b; 2016c).

² Calculated with data from the World Bank (2016d).

³ Calculated with data from the World Bank (2016e; 2016f).

markets. It has been argued that regulations on market access are not enough to increase the market share of the developing countries and would not work without efficient support from developed countries to decrease the costs of trade for these countries. Economic development in developing countries (especially in the least developed countries) requires assistance through capacity building which means support for capital accumulation, infrastructural improvements and technical progress. The idea that trade is not just an alternative to the aid system, but a development strategy that can be supported by specific kinds of aid, influenced researchers and institutions to pay attention to another solution which is aid-for-trade. To further improve the assistance on trade-related costs, in December 2005 at its 6th Ministerial Conference, the WTO initiated the creation a work program for aid-for-trade. The WTO Task Force of aid-for-trade submitted its recommendations to the General Council in 2006 and defined aid-for-trade as follows: “Projects and programs should be considered as aid-for-trade if these activities have been identified as trade-related development priorities in the recipient country's national development strategies” (WTO 2006).

Norway is an important donor of ODA and is one of only six countries fulfilling the United Nations (UN) target of keeping ODA at minimum 0.7% of GNI. Besides being an important donor for general ODA, Norway also supports aid-for-trade and gave NOK 39 billion (\$6 billion) of economic development and trade aid between 2005 and 2015 (NORAD 2016). In Norway’s Aid-for-Trade Action Plan, the Ministry of Foreign Affairs of Norway (MOFA 2007), stated that “Norway’s own experience shows that allowing tariff-free access for imports from the least developed countries does not necessarily lead to a significant increase in imports, partly because the least developed countries lack productive capacity and expertise”. The aid-for-trade contributions of Norway are usually in the form of technical assistance and capacity building activities for developing countries with the priority of targeting Africa and the least developed countries. MOFA claims that the aim for Norway to give aid-for-trade is to ensure the poorest countries can benefit from the possibilities of the multilateral trading system. They emphasize that the transfers from a rich country to poor country must be used for fulfilling the objectives in the WTO Doha Development Round and the Millennium Development Goals launched at the UN Millennium Summit in 2000 as quantified targets for addressing extreme poverty until 2015.

The most vulnerable and poor countries are the intended recipients of aid-for-trade assistance; however, those countries with good policies should be prioritized in the allocation of funds for such aid. The quality of recipients’ policies is defined as the implementation and enforcement of laws/regulations that create quality institutions, that promote democracy and

respect human rights, and that are geared toward greater trade openness. These are important considerations because the effective and efficient management of the aid is critical to achieve sustainable development. Burnside and Dollar (2000) argued that foreign aid has a positive effect on economic growth if the recipient country has good policies. The literature assessing the allocation of funding for general ODA focuses on three motivations. These motivations are the recipients' needs (per capita income), the quality of recipients' policies, and the donors' own political, diplomatic, economic, and/or business interests. The objective of this thesis is to study whether the motivations suggested in the literature affecting the decisions on the allocation of general ODA also explain the aid-for-trade allocation decisions in the case of Norway during 2005-2014. The analysis is undertaken to address three research questions. The first question addresses the effect of GDP per capita of the recipients on per capita aid-for-trade allocation to observe whether the poorest recipients are prioritized by Norway. The second question examines whether per capita aid-for-trade is allocated considering the recipients' merits as measured by the quality of recipients' policies in the three areas identified: institutional quality, democracy and human rights, and trade openness. Finally, whether the allocation of aid-for-trade funding is influenced by national trade interests is answered by observing whether Norwegian aid-for-trade is allocated in exchange for the promotion of Norway's own exports to the recipient countries.

The structure of this thesis is as follows: Chapter two provides some general background on the official development assistance and aid-for trade programs by all assistance-providing countries and for Norway in particular. In chapter three, theoretical concepts are defined and the literature on aid efficiency and allocation is reviewed. In chapter four, the panel data set of 113 recipient countries between 2005-2014 is explained and the specification of a Tobit, a fixed effects and a random effects model as well as a qualitative analysis framework to analyze Norwegian aid allocation is explained and developed. The results of the econometric analysis are presented and discussed in chapter five, and are supplemented with qualitative analysis of the key variables that provide some insight into the allocation of aid-for-trade. The conclusions of the study, its limitations, and suggestions for further study are presented chapter six.

Chapter 2. Official Development Assistance and Aid-for-Trade

2.1 Background

The total amount of ODA increased between 1960 and 1990 while ODA as a percentage of the donor country's gross national income (GNI) continuously increased during the first 10 years of this period before it began to fluctuate between 0.27% and 0.36%. Due to the recession in the early 1990s, ODA fell by 16% in real terms until a recovery started in 1998. However, this recovery was not enough for ODA to increase as a percentage of GNI to catch up to the values before 1990s. After hitting the lowest percentage of GNI in 2001 (0.22%), ODA flows improved with the help of international conferences and summits (OECD 2016b). Since the millennium development goals were accepted in 2000, total ODA increased by 83% through 2015 (OECD 2016c).

The International Conference on Financing for Development took place in 2002, urging the donors to set firm targets as a percentage of GNI and resulted in an improvement for the ODA percentages (OECD 2016b). ODA levels had a peak in 2005 due to the large amount of debt relief to Iraq and Nigeria resulting from humanitarian crises (OECD 2016b). At that time, the Gleneagles G8 summit of 2005 targeted a doubling of aid to Africa by 2010 (UN 2006). Even though the targets were not fully committed (OECD 2016d), ODA levels started to rise after 2008 and reached another peak in 2010, that was higher than that in 2005. The share of ODA as a percentage of GNI rose back to around 0.3% (OECD 2016e). In 2011, this increasing trend gave way due to the global recession. An annual 2% decrease in 2011 was followed by another 4% decrease in 2012 (OECD 2013a). This downward trend reversed when ODA recovered by a 6% rise in 2013 (OECD 2014). The total ODA value given by DAC countries in 2015 was \$131.6 billion, making up the 0.3% of the total GDP of the DAC countries⁴.

The DAC has 30 members providing ODA. Table 1 shows the trends in the value of ODA of the important donor countries between 2005 and 2015. The United States, United Kingdom, Germany, France and Japan contributed the largest amount. During this period, an annual average of \$30.6 billion has been provided by the United States, nearly double the of the next largest donors, the United Kingdom and Germany. The Netherlands, Luxemburg and the Nordic countries (Sweden, Norway and Denmark) on the other hand, fulfilled the UN target of giving ODA equal to at least 0.7% of their GNI even though the total amount of ODA they contributed is not as much as the top four countries. Norway, Sweden and Luxemburg have

⁴ Calculated with data from the OECD (2016f).

given annually the highest average of 1% of their GNI nearly three times more than the average of all donors.

In December 2005, the WTO initiated the creation of a work program for aid-for-trade to further improve the assistance on trade related costs at its 6th Ministerial Conference (WTO 2017). The WTO Task Force of aid-for-trade submitted its recommendations to the General Council in 2006. The task force listed the priorities for aid-for-trade programs as: Technical assistance for trade policy and regulations (training of trade officials, analysis of proposals and positions and their impact, support for national stakeholders to articulate commercial interest and identify trade-offs, dispute issues, institutional and technical support to facilitate implementation of trade agreements and to adapt to and comply with rules and standards); Trade development and building productive capacity (investment promotion, analysis and institutional support for trade in services, business support services and institutions, public-private sector networking, e-commerce, trade finance, trade promotion, market analysis and development); trade-related infrastructure, and trade related-adjustments (WTO 2006). Aid-for-trade is a component of ODA and the OECD recognizes aid-for-trade as “a holistic framework which encourages policymakers to use trade as a lever for economic growth and poverty alleviation” (OECD/WTO 2011).

Table 1. ODA from Selected DAC Donors (million USD, % of donor GNI), 2005-2015

| Year | Selected DAC Donors Providing ODA | | | | | | | | | | | | | | | | | | | |
|---------|-----------------------------------|-----|--------|-----|---------|-----|-------|-----|-----------|-----|--------|-----|--------|-----|-------------|-----|-------|-----|-------|-----|
| | Denmark | | France | | Germany | | Japan | | Luxemburg | | Norway | | Sweden | | Netherlands | | UK | | USA | |
| 2005 | 2691 | 0.8 | 12028 | 0.5 | 12103 | 0.4 | 12629 | 0.3 | 361 | 0.8 | 4042 | 0.9 | 4294 | 0.9 | 6154 | 0.8 | 12029 | 0.5 | 33006 | 0.2 |
| 2006 | 2769 | 0.8 | 12325 | 0.5 | 12364 | 0.4 | 11453 | 0.2 | 379 | 0.9 | 3902 | 0.9 | 4898 | 1.0 | 6337 | 0.8 | 13347 | 0.5 | 26983 | 0.2 |
| 2007 | 2833 | 0.8 | 10274 | 0.4 | 13132 | 0.4 | 8086 | 0.2 | 442 | 0.9 | 4386 | 1.0 | 4792 | 0.9 | 6496 | 0.8 | 9440 | 0.4 | 24340 | 0.2 |
| 2008 | 2827 | 0.8 | 10511 | 0.4 | 14061 | 0.4 | 8980 | 0.2 | 448 | 1.0 | 4151 | 0.9 | 4998 | 1.0 | 6758 | 0.8 | 11847 | 0.4 | 28969 | 0.2 |
| 2009 | 2917 | 0.9 | 12565 | 0.5 | 12367 | 0.4 | 8032 | 0.2 | 456 | 1.0 | 4908 | 1.1 | 5361 | 1.1 | 6413 | 0.8 | 13189 | 0.5 | 31340 | 0.2 |
| 2010 | 3037 | 0.9 | 13390 | 0.5 | 13866 | 0.4 | 9003 | 0.2 | 452 | 1.0 | 4776 | 1.1 | 4989 | 1.0 | 6610 | 0.8 | 14968 | 0.6 | 31854 | 0.2 |
| 2011 | 2932 | 0.9 | 12722 | 0.5 | 14179 | 0.4 | 8357 | 0.2 | 420 | 1.0 | 4514 | 1.0 | 5493 | 1.0 | 6271 | 0.8 | 14971 | 0.6 | 32585 | 0.2 |
| 2012 | 2839 | 0.8 | 12586 | 0.5 | 13877 | 0.4 | 8084 | 0.2 | 426 | 1.0 | 4526 | 0.9 | 5303 | 1.0 | 5824 | 0.7 | 14968 | 0.6 | 31672 | 0.2 |
| 2013 | 2949 | 0.9 | 11397 | 0.4 | 14477 | 0.4 | 10749 | 0.2 | 433 | 1.0 | 5231 | 1.1 | 5617 | 1.0 | 5474 | 0.7 | 19132 | 0.7 | 31793 | 0.2 |
| 2014 | 3003 | 0.9 | 10620 | 0.4 | 16566 | 0.4 | 9483 | 0.2 | 423 | 1.1 | 5086 | 1.0 | 6233 | 1.1 | 5573 | 0.6 | 19306 | 0.7 | 33096 | 0.2 |
| 2015 | 3028 | 0.8 | 10698 | 0.4 | 21044 | 0.5 | 10287 | 0.2 | 420 | 1.0 | 5528 | 1.0 | 8523 | 1.4 | 6829 | 0.7 | 19754 | 0.7 | 30675 | 0.2 |
| Average | 2893 | 0.8 | 11738 | 0.4 | 14367 | 0.4 | 9558 | 0.2 | 423 | 1.0 | 4641 | 1.0 | 5500 | 1.0 | 6249 | 0.8 | 14814 | 0.6 | 30574 | 0.2 |

Source: OECD (2016f).

Since 2005, \$208 billion trade-related ODA has been given by the DAC countries. Table 2 presents the trends in aid-for-trade by DAC countries which increased between 2005 and 2015. The share of aid-for-trade from DAC countries of total ODA from DAC countries also increased during this period, from 9% to 16%, before falling back to 14% in 2015.

Table 2. Aid-for-Trade from DAC Countries (million USD), 2005-2015

| Year | Aid-for-Trade | Aid-for-Trade as a % of ODA |
|------|---------------|-----------------------------|
| 2005 | 11 939 | 9.3 |
| 2006 | 13 155 | 10.8 |
| 2007 | 15 001 | 13.3 |
| 2008 | 17 999 | 14.3 |
| 2009 | 18 180 | 14.2 |
| 2010 | 21 650 | 16.1 |
| 2011 | 22 363 | 16.8 |
| 2012 | 21 655 | 16.9 |
| 2013 | 22 014 | 16.2 |
| 2014 | 22 796 | 16.5 |
| 2015 | 21 647 | 14.8 |

Source: OECD (2016f; 2016g)

The total aid-for-trade supplied was provided under three main categories of assistance: technical assistance for trade policy and regulations; economic infrastructure and productive capacity building; and trade related adjustments. Economic infrastructure and productive capacity building covered the largest share with 53% and 44% of the total amount, respectively. Economic infrastructure includes the sub-categories of transport and storage, energy generation and supply and communication. Productive capacity building targeted the agriculture, banking, industry and mining, business services, tourism, forestry and fishing sectors. About 2.8% of the total amount spent on was technical assistance on trade policy and regulation while only less than 1% went to trade-related adjustments.⁵ Countries in Asia and Africa received the biggest share of aid-for-trade flows 38% and 35% of the total, respectively (OECD/WTO 2015).

⁵ Calculated with data from the OECD (2016g).

2.2 Norway's ODA and Aid-for-Trade

Norway's first bilateral aid project, the Indo-Norwegian Fisheries Project, was launched in 1952, and provided aid to India. Pharo (2003), explains the motives for Norway's initiation of this aid program as expression of social democratic solidarity from the point of the labor party, and Christian humanistic ideals from the point of the center right parties. He argues that a possible gain for Norway would be the improvements in the very limited trade relations between third world countries and Norway, as well as the desire for Norway to keep its reputation as an altruistic example for the rest of the world. Aid is an effective way of marketing Norway in the international arena as Jan Egeland argued (Simensen 2008).

In 1960, aid was only 0.11% of the GNI of Norway and it did not reach the 0.7% UN target until 1976 (Pharo 2003). Norway, as a small country with limited resources, focused on certain countries throughout the 1960s, which has remained the manner of aid-giving to the present day. However, a process initiated in the 1980s and formalized in a 1992 white paper encouraged the shift from focusing on specific countries to focusing on regions or special programs. The share of the main partner countries in the total bilateral ODA declined from 81% in 1985 to 23% in 2001 (Stokke 2005).

In the late 1960s Norway started to place more importance on east Africa, alongside the initial countries. A collective Nordic aid project with Tanzania has initiated this process. Tanganyika (then a sovereign state, now a part of Tanzania) was chosen for this project among the list of five possible countries. Even though Nigeria was first offered by Denmark and Sweden, Norway and Finland supported the choice of Tanganyika arguing none of the Nordic countries have any interests in that region while Nordic trade and shipping was already well established in Nigeria (Simensen 2008). Norwegian aid to Africa in this period did not show economic or missionary interests. Uganda, Tanzania, Kenya, and Zambia were included amongst the other recipients which are still important recipients of Norwegian aid. It was not until the 1970s that large projects were established in east Africa (Pharo 2003).

The policy papers in 1992 argued that promotion of economic and political liberalism (which consists of democracy, human rights and good governance) has been an objective for Norway since 1980s (Stokke 2005). This focus shows Norway acknowledging these policies as an important incentive for aid effectiveness since that time. Stokke (1989) points out that in early 1980s there was criticism in the parliament towards the policy performances of some recipient countries such as Pakistan, Kenya, Mozambique, and Sri Lanka and there were demands for the termination of aid relations, yet these changes were not made. He argued that,

until 1984 when the white papers provided guidelines for the reactions to systematic violations of human rights, not much attention was given to the human rights performances of priority recipient countries.

Poverty was a very important criterion for aid allocation of Norway, particularly starting from the early 1970s (Stokke 2005). A report commissioned by the Norwegian Ministry of Foreign Affairs and prepared by Collier and Dollar (2001), argued that nearly half of Norwegian ODA went to countries with high poverty and good policies. As a result, they estimated that Norwegian ODA had 50% more impact on poverty alleviation than general ODA. However, after 2008 Norwegian bilateral ODA allocation underwent changes concerning the recipients' income level according to OECD (2013b). The shares of aid to LDCs decreased while shares to middle-income countries rose. Nevertheless, the share of aid given to LDCs in total Norwegian bilateral ODA was 59% in 2011.

However, Norway did not allocate aid solely based on this criterion. Starting from the 1990s, Norway increased its aid to areas such as Palestine with the intention of relieving suffering due to conflict. Similarly, aid transfers to Palestine are very high during 2005-2014 compared to the regions with significantly lower GDP per capita values. This criterion was also used to select main partner countries such as Eritrea and Ethiopia. Stokke (2005) argues that this criterion and the private sector interests of Norway at the time hurt the poverty-oriented manner of Norwegian aid.

Between 2005 and 2015, Norway gave an average of NOK 26 billion in ODA per year. Table 3 presents Norway's ODA by regions and some important individual recipient countries during this period. Africa received the biggest annual average of NOK 5.5 billion, nearly double the annual average of NOK 2.8 billion that went to Asia. Even though Africa received the most aid as a continent, Brazil was the country receiving the highest amount of total aid from Norway during this period. This is mostly due to the support for deforestation-related projects.

Nearly half of the development aid from Norway is managed by multilateral organizations and one fourth of it is managed by the public sector of Norway. The rest is managed by the public sector of the recipient country, Norwegian non-governmental organizations, and international and local non-governmental organizations. Only 1% is managed by the private sector. One fourth of the total ODA went to multilateral projects. The bilateral aid went for projects with programming activities aimed at seven main objectives: good governance; economic development and trade; environment and energy; health and social services; education; emergency assistance and in-donor-costs. Projects whose programming

Table 3. Norwegian ODA by Region and Top Countries (million NOK), 2005-2015

| Year | Regions and Top Recipient Countries | | | | | | | | | |
|-------|-------------------------------------|--------|--------------|-------------|--------|---------|--------|-------------|-----------|----------|
| | Africa | Asia | The Americas | Middle East | Europe | Oceania | Brazil | Afghanistan | Palestine | Tanzania |
| 2005 | 4 617 | 3 358 | 681 | 751 | 817 | 3 | 18 | 386 | 476 | 388 |
| 2006 | 4 984 | 2 292 | 697 | 952 | 803 | 3 | 18 | 447 | 562 | 483 |
| 2007 | 5 344 | 2 884 | 1 622 | 912 | 668 | 3 | 55 | 553 | 621 | 666 |
| 2008 | 5 862 | 2 924 | 845 | 905 | 632 | 9 | 33 | 736 | 660 | 728 |
| 2009 | 5 679 | 2 691 | 880 | 845 | 627 | 11 | 185 | 727 | 628 | 730 |
| 2010 | 5 735 | 3 214 | 1 382 | 892 | 683 | 10 | 226 | 726 | 661 | 749 |
| 2011 | 6 063 | 2 785 | 1 432 | 904 | 633 | 14 | 406 | 775 | 628 | 640 |
| 2012 | 5 563 | 2 636 | 2 151 | 1 082 | 657 | 9 | 1 248 | 730 | 623 | 538 |
| 2013 | 6 155 | 2 750 | 4 784 | 1 679 | 575 | 9 | 3 988 | 745 | 632 | 583 |
| 2014 | 5 932 | 2 675 | 2 155 | 1 695 | 627 | 10 | 882 | 758 | 741 | 452 |
| 2015 | 5 424 | 2 674 | 1 921 | 2 395 | 757 | 19 | 1 267 | 691 | 630 | 384 |
| Total | 61 361 | 30 888 | 18 554 | 13 016 | 7 485 | 105 | 8 330 | 7 278 | 6 869 | 6 347 |

Source: NORAD (2016).

activities targeted economic development and trade, and good governance received the largest share of total aid, amounting to 14% for each objective.

White papers in 1961 considered trade as the main promoter of economic growth. They noted that aid should contribute to improving productive capacity of the recipient country and support the mechanisms to improve market conditions for third world exports (Stokke 1989). Norwegian aid-for-trade can be categorized under the same framework as the general aid-for-trade. Three of the four components that constitute aid-for-trade are capacity building, assistance on trade policy and regulations, and trade-related adjustments. NORAD reports aid related to these categories under the main category of “economic development and trade”. Norway provided capacity building aid to the following sectors: agriculture, banking and financial services, industry, mining, business, fishing, forestry, tourism and construction. This support to those sectors received 35% of the total aid-for-trade from Norway. Projects whose support was on trade policy and regulations, and on trade-related adjustments, accounted for 2% of the total amount.

Another component of aid-for-trade, support for economic infrastructure, consists of three main parts: transport and storage, communication, and energy. NORAD includes the categories transport and storage, and communication under the main “economic development and trade” category when reporting. However, they report energy-related aid under a general category of energy that does not make it possible to separate energy-related aid used in promotion of trade from the rest of aid for energy. For the purposes here, the entire energy category is included into the value of aid-for-trade, since the investments in the energy sector are argued to be related to trade development. The sum of transport and storage and communication categories, and energy-related aid, makes up 25% of total aid-for-trade.

Norwegian bilateral aid-for-trade (excluding the aid given to a general region rather than a country) was NOK 36,5 billion between 2005 and 2015 (this value is based on including the categories selected and explained). Table 4 summarizes the flow of aid-for-trade from Norway by regions and for some important recipients. Norwegian aid-for-trade follows a similar pattern when it comes to the allocation across continents. The top two regions receiving aid-for-trade from Norway are Africa and Asia. The total amount of aid-for trade to Africa is double the amount to Asia. Tanzania and Afghanistan are the top two recipient countries both receiving a similar amount about NOK 3500 million. Tanzania’s share is more than 15% of the total aid-for-trade that goes to Africa, while Afghanistan’s share of the total Asian aid-for-trade from Norway amounts to a third. Palestine is the largest recipient in the Middle East.

Table 4. Norwegian Bilateral Aid-for-Trade by Region and Top Countries (million NOK), 2005-2015

| Year | Regions and Top Recipient Countries | | | | | | | | | |
|-------|-------------------------------------|-------|---------|-------------|--------|----------|-------------|------------|-----------|--------|
| | Africa | Asia | America | Middle East | Europe | Tanzania | Afghanistan | Mozambique | Palestine | Uganda |
| 2005 | 1 197 | 951 | 219 | 107 | 70 | 176 | 193 | 236 | 78 | 105 |
| 2006 | 1 565 | 708 | 228 | 98 | 61 | 316 | 184 | 235 | 95 | 136 |
| 2007 | 1 773 | 917 | 1 023 | 256 | 97 | 392 | 212 | 282 | 242 | 174 |
| 2008 | 2 149 | 850 | 251 | 345 | 107 | 440 | 256 | 384 | 340 | 222 |
| 2009 | 2 015 | 536 | 86 | 342 | 98 | 449 | 269 | 367 | 337 | 236 |
| 2010 | 1 988 | 930 | 182 | 345 | 92 | 501 | 441 | 335 | 341 | 256 |
| 2011 | 2 184 | 1 021 | 423 | 350 | 128 | 392 | 432 | 348 | 344 | 263 |
| 2012 | 1 410 | 952 | 1 139 | 369 | 91 | 259 | 481 | 386 | 351 | 126 |
| 2013 | 1 913 | 796 | 291 | 401 | 58 | 371 | 424 | 181 | 357 | 224 |
| 2014 | 1 516 | 726 | 84 | 356 | 75 | 215 | 348 | 220 | 325 | 227 |
| 2015 | 1 254 | 692 | 65 | 287 | 277 | 144 | 306 | 155 | 248 | 167 |
| Total | 18 970 | 9 085 | 3 996 | 3 260 | 1 160 | 3 660 | 3 550 | 3 133 | 3 063 | 2 142 |

Source: NORAD (2016).

Since there are a lot more developing countries in Africa and Asia, the total amount of aid-for-trade given to countries in these regions is notably higher than the other regions. However, the average values by countries paint a different picture. Table 5 introduces the trend of average values countries received in each region for the countries with full data available. These results are presented in USD to match the currency used in the analyses. The Middle East is the region that received the highest amount of aid-for-trade per country average. This average is mostly effected by the Palestine and the increasing aid flow after the conflict in 2007. The annual average aid-for-trade given to the recipients in the Middle East took off in 2007, and it averaged 50% more aid-for-trade than given to African recipients per year. The recipients in Africa and Asia are the next biggest recipients, with similar annual averages to each other. The recipient countries in the Americas received roughly one third of the annual country average in Africa. The trend is the Americas experienced an increase in the country average in 2007 and in 2012. This increase is mostly due to the hydropower-related aid going to Peru and Brazil in 2007 and 2012, respectively. The top five countries (Tanzania, Afghanistan, Mozambique, Palestine, Uganda) received more ten times higher aid-for-trade on average than the general average of all countries.

Table 5. Norwegian Aid-for-Trade by Recipient Average of Regions (thousand USD), 2005-2014

| Year | Africa | Asia | Americas | Middle East | Europe | Top 5 | Total avg |
|------|--------|-------|----------|-------------|--------|--------|-----------|
| 2005 | 3 364 | 5 658 | 1 174 | 3 281 | 1 056 | 24 567 | 2 907 |
| 2006 | 4 553 | 4 246 | 1 229 | 3 056 | 950 | 30 177 | 2 807 |
| 2007 | 5 866 | 6 002 | 6 025 | 8 752 | 1 331 | 44 512 | 5 595 |
| 2008 | 7 829 | 5 733 | 1 521 | 12 090 | 1 572 | 57 648 | 5 749 |
| 2009 | 7 085 | 3 287 | 475 | 10 910 | 1 085 | 52 868 | 4 568 |
| 2010 | 7 188 | 5 921 | 1 041 | 11 347 | 1 182 | 62 077 | 5 336 |
| 2011 | 8 422 | 7 011 | 2 603 | 12 465 | 1 570 | 63 563 | 6 414 |
| 2012 | 5 100 | 6 300 | 6 759 | 12 594 | 1 244 | 55 232 | 6 399 |
| 2013 | 6 742 | 5 209 | 1 709 | 13 645 | 931 | 53 050 | 5 648 |
| 2014 | 5 071 | 4 436 | 461 | 11 313 | 1 565 | 42 478 | 4 569 |

Notes: The countries included are on the OECD list of eligible countries for ODA for which data are available for all the variables used in the analysis. Top 5 includes the five largest aid-for-trade recipient countries, and Total avg is the average of all five regions.

Source: (NORAD 2016)

Table 6 reports the annual average GDP per capita values for recipient countries by region. The recipient countries from Africa and Asia have significantly lower annual average GDP per capita values compared to the other regions. The top four recipients of aid-for-trade, excluding Palestine, had lower annual averages of GDP per capita values than the region with lowest values, Africa. Average GDP has increased for all regions through the years, with the exception of the average for recipient countries in the Middle East and Europe in 2015. The average GDP of top four countries increased 50% through the years while the total average of all recipient countries hardly changed.

Table 6. GDP Per Capita by Recipient Average of Regions (USD), 2005-2014

| Year | Africa | Asia | Americas | Middle East | Europe | Palestine | Top 4 | Total avg |
|------|--------|-------|----------|-------------|--------|-----------|-------|-----------|
| 2005 | 2 380 | 2 089 | 5 801 | 4 382 | 4 016 | 2 530 | 460 | 3734 |
| 2006 | 2 475 | 2 274 | 6 099 | 4 479 | 4 275 | 2 353 | 479 | 3920 |
| 2007 | 2 628 | 2 479 | 6 406 | 4 680 | 4 524 | 2 254 | 509 | 4143 |
| 2008 | 2 728 | 2 596 | 6 583 | 4 815 | 4 727 | 2 002 | 524 | 4290 |
| 2009 | 2 707 | 2 599 | 6 388 | 5 044 | 4 562 | 2 353 | 557 | 4260 |
| 2010 | 2 708 | 2 747 | 6 516 | 5 189 | 4 808 | 2 339 | 576 | 4394 |
| 2011 | 2 794 | 2 882 | 6 699 | 5 206 | 5 035 | 2 448 | 602 | 4523 |
| 2012 | 2 882 | 3 014 | 6 841 | 5 169 | 5 056 | 2 720 | 627 | 4592 |
| 2013 | 2 909 | 3 141 | 6 978 | 5 024 | 5 167 | 2 527 | 637 | 4644 |
| 2014 | 2 938 | 3 262 | 7 184 | 4 944 | 5 253 | 2 427 | 650 | 4716 |

Notes: The countries included are on the OECD list of eligible countries for ODA for which data are available. Top 4 includes the four of the top five aid-for-trade recipient countries, and Total avg is the average of all five regions.

Source: World Bank (2016g).

The trends in annual averages of indexes reflecting the merits of recipients are presented as recipient averages of regions in Table 7. The region receiving the highest Norwegian aid-for-trade per country, the Middle East, contains the recipient countries with the second highest values of trade openness on average. European recipient countries, which received the lowest aid-for-trade on average, had the highest average trade openness. The top five aid-for-trade recipient countries, have even lower annual trade openness averages than the region with the lowest values: the Americas.

Table 7. Indexes of Indicators for Trade Openness, Rule of Law and Voice and Accountability by Recipient Average of Regions, 2005-2014

| Year | Trade Openness | | | | | | | Rule of Law | | | | | | | Voice and Accountability | | | | | | |
|------|----------------|----|----|-----|-----|-------|-----------|-------------|-------|-------|-------|-------|-------|-----------|--------------------------|-------|------|-------|-------|-------|-----------|
| | AF | AS | AM | ME | EUR | Top 5 | Total avg | AF | AS | AM | ME | EUR | Top 5 | Total avg | AF | AS | AM | ME | EUR | Top 5 | Total avg |
| 2005 | 80 | 88 | 81 | 101 | 96 | 70 | 89 | -0.66 | -0.60 | -0.34 | -0.54 | -0.56 | -0.68 | -0.54 | -0.57 | -0.81 | 0.08 | -0.86 | -0.34 | -0.56 | -0.51 |
| 2006 | 80 | 90 | 81 | 94 | 96 | 70 | 88 | -0.61 | -0.65 | -0.32 | -0.66 | -0.63 | -0.74 | -0.57 | -0.54 | -0.85 | 0.22 | -0.96 | -0.25 | -0.55 | -0.49 |
| 2007 | 83 | 91 | 81 | 94 | 99 | 68 | 89 | -0.61 | -0.64 | -0.34 | -0.70 | -0.58 | -0.73 | -0.57 | -0.55 | -0.82 | 0.23 | -0.89 | -0.23 | -0.47 | -0.46 |
| 2008 | 86 | 91 | 84 | 95 | 100 | 67 | 91 | -0.60 | -0.63 | -0.35 | -0.72 | -0.50 | -0.79 | -0.56 | -0.56 | -0.80 | 0.23 | -0.93 | -0.23 | -0.55 | -0.47 |
| 2009 | 77 | 80 | 71 | 83 | 87 | 60 | 80 | -0.61 | -0.66 | -0.33 | -0.78 | -0.47 | -0.84 | -0.57 | -0.59 | -0.78 | 0.21 | -0.92 | -0.24 | -0.60 | -0.49 |
| 2010 | 81 | 82 | 77 | 82 | 93 | 60 | 83 | -0.61 | -0.68 | -0.31 | -0.68 | -0.46 | -0.72 | -0.55 | -0.59 | -0.78 | 0.21 | -0.94 | -0.26 | -0.63 | -0.50 |
| 2011 | 84 | 88 | 81 | 82 | 107 | 64 | 88 | -0.62 | -0.68 | -0.30 | -0.62 | -0.47 | -0.72 | -0.54 | -0.57 | -0.75 | 0.19 | -0.93 | -0.30 | -0.60 | -0.49 |
| 2012 | 84 | 87 | 80 | 89 | 103 | 67 | 88 | -0.61 | -0.64 | -0.33 | -0.64 | -0.43 | -0.73 | -0.53 | -0.56 | -0.73 | 0.18 | -0.96 | -0.32 | -0.63 | -0.50 |
| 2013 | 82 | 86 | 77 | 84 | 97 | 68 | 85 | -0.61 | -0.63 | -0.32 | -0.66 | -0.42 | -0.76 | -0.53 | -0.56 | -0.71 | 0.19 | -0.97 | -0.34 | -0.64 | -0.50 |
| 2014 | 80 | 84 | 77 | 84 | 96 | 68 | 84 | -0.54 | -0.52 | -0.36 | -0.62 | -0.35 | -0.72 | -0.48 | -0.50 | -0.69 | 0.22 | -0.98 | -0.28 | -0.61 | -0.47 |

Notes: AF refers to Africa, AS is Asia, AM is the Americas, ME is the Middle East, and EUR is Europe. The countries included are on the OECD list of eligible countries for ODA for which data are available. Top 5 includes the five largest aid-for-trade recipient countries, and Total avg is the average of all five regions.

Source: World Bank (2016h).

Even though the recipient countries in the Middle East had the lowest annual regional averages in rule of law, the recipients from Africa and Asia followed it with similar low averages compared to other regions. The voice and accountability index showed a similar ranking between regions. The recipient countries from the Americas had significantly higher values than the rest of the regions and the recipients in the Middle East had very low values. The annual averages of top five aid-for-trade recipient countries were lower than the general annual averages for both indexes. Both the average voice and accountability scores of the four top recipients and the general average voice and accountability scores of all recipients slightly increased over time, while rule of law and trade openness scores fluctuated around similar values.

The trends of annual averages of export values from Norway to the recipient countries are presented as recipient average by region in Table 8. Giving 100% of its aid untied, Norway has a reputation of being altruistic in its aid allocation. One means of measuring Norway's altruism is to see whether there are any links between Norway's aid provision and the value of its exports. The more Norway exports to a recipient country could bring into question whether the aid offered is in fact untied. Recipient countries in the Middle East have the lowest exports received from Norway on average and the recipients from Africa follow it as the second lowest. Recipients from Asia and Europe have the highest export averages. The annual averages of export value to the top five recipient countries were very small compared with the annual averages of all recipient countries. All regions have an increasing trend of importing from Norway between 2005 and 2014, with the exception of the Middle East after 2012.

Norway is a generous donor giving 0.7% of GNI as ODA. However, it still has a smaller budget than some of the other big donors such as the United States, United Kingdom, or France. This limited budget requires Norway to be more concentrated on certain countries and regions. The decision of these countries and regions results in a dilemma of channeling aid to the poorest and vulnerable while making sure that the recipient has sufficient policy qualities to use aid-for-trade efficiently to achieve development.

Table 8. Norwegian Export to the Recipient Countries by Recipient Average of Regions
(million USD), 2005-2014

| Year | Africa | Asia | Americas | Middle East | Europe | Top 5 | Total avg |
|------|--------|-------|----------|-------------|--------|-------|-----------|
| 2005 | 13.9 | 55.7 | 31.0 | 9.7 | 84.0 | 2.7 | 38.85 |
| 2006 | 13.7 | 97.0 | 26.6 | 11.6 | 104.8 | 4.1 | 50.73 |
| 2007 | 22.5 | 113.0 | 39.9 | 9.4 | 95.8 | 6.5 | 56.13 |
| 2008 | 27.3 | 147.4 | 46.8 | 16.8 | 104.4 | 4.7 | 68.56 |
| 2009 | 21.2 | 150.2 | 31.6 | 12.3 | 138.7 | 10.6 | 70.81 |
| 2010 | 29.6 | 142.2 | 49.6 | 13.7 | 114.1 | 4.2 | 69.85 |
| 2011 | 28.7 | 170.4 | 52.3 | 11.0 | 174.3 | 10.1 | 87.34 |
| 2012 | 35.1 | 150.4 | 63.9 | 11.7 | 183.2 | 14.6 | 88.87 |
| 2013 | 38.9 | 162.8 | 51.6 | 6.6 | 184.6 | 8.8 | 88.90 |
| 2014 | 45.9 | 190.6 | 61.6 | 9.1 | 195.2 | 11.9 | 100.49 |

Notes: The countries included are on the OECD list of eligible countries for ODA for which data are available. Top 5 includes the five largest aid-for-trade recipient countries, and Total avg is the average of all five regions.

Source: UN (2017).

Chapter 3. Theory and Literature Review

3.1 Impact of Aid on Growth and the Role of Good Policies

Burnside and Dollar (2000), argued that foreign aid can have a positive effect on growth if the recipient country has good policies. They estimated growth in GDP per capita with initial GDP per capita, level of aid as a fraction of GDP and vector of policies effecting growth. They introduced a new variable multiplying this policy index with the aid variable and found that this aid/policy interaction variable was significant and positively correlated once they excluded the outliers. They argued that aid combined with good policies yield a larger positive effect on growth than they have separately. Hansen and Tarp (2001) criticized the findings in Burnside and Dollar (2000) and concluded that aid has a positive effect on growth rate through investment yet it is not conditional on policy indicators as they claimed. They modified the Burnside and Dollar model including nonlinear forms of independent variables such as aid and also controlled for individual country effects and concluded that their aid/policy interaction variable was not significant. This result challenged the reliability of their policy indicator.

Despite these critiques, Burnside and Dollar (2000) had a big influence on the debate on foreign aid and on how donors assess their aid allocation. Collier and Dollar (2002), in light of the empirical findings of Burnside and Dollar (2000) drove a poverty efficient allocation of aid. They showed that growth of GDP per capita (G) is determined by the function:

$$G = c + b_1X + b_2P + b_3A + b_4A^2 + b_5AP \quad (1)$$

where X is the exogenous conditions, P is the level of policy, A is the level of net receipts of aid relative to GDP, A^2 is the level of aid squared (return of aid is diminishing), and AP is the interaction of policy and aid. The marginal impact of aid on growth is,

$$G^a = b_3 + b_5P + 2b_4A \quad (2)$$

where b_4 is negative due to the diminishing returns of aid and b_5 is positive.

They assumed aid is given with the purpose of maximizing the reduction of poverty as well as policies and income distribution being exogenous from aid. Thus, the objective function of the donors is to maximize poverty reduction: $\sum_i G_i \alpha_i h_i N_i$ stated to $\sum_i A_i y_i N_i = \bar{A}$ where y is per capita income, \bar{A} is the total amount of aid, h is a measure of poverty (headcount index or other measures), α is the elasticity of poverty reduction with respect to income, N is population, and the subscript i indexes countries.

Assuming each country receiving positive aid, the first order condition for maximum poverty reduction which is the derivation of the Lagrange function in respect to A_i being equal

to zero, yields, $G_i^a \alpha_i h_i N_i = \lambda y_i N_i$. Inserting the equation for G^a from equation (2) and solving for A_i yields the equation stating that for a poverty reduction maximizing result aid allocation of each country should be a function of its policy qualities and needs. The level of aid relative to GDP is,

$$A_i = -\frac{b_3}{2b_4} - \frac{b_5}{2b_4} P + \frac{\lambda y_i}{2b_4 \alpha_i h_i} \quad (3)$$

which has a positive coefficient for policy and a negative coefficient for GDP per capita since $b_4 < 0$.

3.2 Literature Review

The literature on the allocation of aid is varied with results and insights that do not offer a consensus. The first studies using econometric modelling on the determinants of aid allocation were conducted on the US through the pioneering work of McKinlay and Little (1977). They estimated separate equations including variables representing recipient-needs and donor-interest aspects of aid allocation of the US between 1960 and 1970. They used variables such as GDP per capita, per capita GDP growth and gross domestic fixed capital formation to explain the needs of the recipient. The donor interest part consisted of five different models for each category of donor interest group. These are US overseas economic interests, US security interests, power political interests, development and performance interests, and political stability and democracy interests. Their results indicated that power-political and security concerns such as military resources were the main determinants of US aid allocation decisions and the model which is based on recipients' needs do not explain US aid allocation. Donor countries and their aid agencies have different objectives. While Norway claims to be only motivated by the benefit of recipient countries other big donors such as the US includes their own benefit into even their objectives. USAID's statement is "We partner to end extreme poverty and promote resilient, democratic societies while advancing our security and prosperity." (USAID 2016). Thus, the aid allocation pattern of Norway is expected to be different from those big donors.

Maizels and Nissanke (1984) worked with a similar recipient-needs and donor-interest model using a cross-country data set of donors including the US, France, Germany, Japan and the UK between 1969 and 1980. They included variables such as GDP per capita, a physical quality of life index, GDP growth and the current account of the balance of payments as explanatory variables of recipient need model. In contrast to McKinlay and Little (1977), they analyzed donor interests using a model with variables in three categories: political and security interests, donor investment interests, donor trade interests. The only similar interest category

among those in this thesis is the donor trade interests. However, their approach to trade interest is different since they measure it with availability of strategic materials while this thesis measures it as the import from the donor country. The study analyzed both bilateral and multilateral aid flows and concluded that bilateral aid was determined by the donor interests whereas multilateral aid was provided according to the recipients' needs. Gounder (1994) employed the model used by Maizels and Nissanke (1984) and analyzed Australian bilateral aid allocation during 1971-1992, showing a difference between Australian aid allocation patterns and the pattern of the big donors. They found that donor interest explains aid allocation similar to the findings of other studies. In addition, recipients' needs were also important in the case of Australia's bilateral aid programs in contrast to the big donors such as the US. McGillivray (2003) later criticized separating recipient need and donor interest models by arguing that all variables needed to be introduced together in the same model to avoid biases due to omitted variables.

McGillivray and Oczkowski (1992) assessed British bilateral aid allocation in two different ways. They included recipients' needs and donor interests in the same model and used a two-part decision making model to acknowledge that aid allocation is a two-stage process including the decision of giving aid and the decision on the amount of aid. Using a two-part sample selection model, they tested the hypothesis that British bilateral aid allocation decisions were based on humanitarian, commercial and political interests. GDP per capita with some dummy variables for the least developed and newly industrialized countries were included to explain recipients' needs. The political interests were presented with variables such as a commonwealth country dummy, the value of British arms transferred to the recipient country, and the aid received from other donors. They measured trade interests with export volume of the donor country to the recipient. The results showed that recipients' needs and donor interests both explain aid allocation of Britain.

While these studies in earlier period focused on recipients' needs and donor interests as explanations for aid allocation, they did not focus on recipient merits. Recipient merits were not a focus until it was argued to affect aid efficiency and studies began to include recipient merits among the motivations. These aid allocation studies were done on multiple donors, on a single model of aid allocation rather than separate recipient need and donor interest models. The policy variables generally involve three areas which are institutional quality and corruption, human rights and democracy, and trade policies. Alesina and Dollar (2000) analyzed aid allocation of 21 donor countries aggregated and separately (using Scandinavia as one aggregated donor) between 1970 and 1994 using the OLS estimation method. They used

initial GDP per capita as the variable for recipients' needs, the Sachs-Warner trade openness index, the democracy index (Freedom House), and FDI as the policy variables. They also introduced a new index of UN vote counts as a proxy for political interest alongside with a colony dummy. The results showed that the political and strategic motives of donors were more important in aid allocation than the recipient countries' policy qualities or needs. In contrast to the other large donors, Nordic countries (Denmark, Finland, Norway, and Sweden) found to be not driven by political interests. These outcomes added to the evidence supporting the altruistic reputation of Scandinavian countries including Norway.

Other two studies Weder and Alesina (2002) and Neumayer (2003) focused on the determinants such as corruption and human rights, respectively, which are two related policy qualities I will be focusing on in the case of Norway. Weder and Alesina (2002) asked whether the recipient countries with corrupt governments receive less aid by analyzing the data both at total level of aid and for the level of individual donors with the averages from 1975-1998 in a cross-country data set. Norway's aid is included in the aggregate aid from Scandinavian countries. They ran a Tobit model where the needs of recipients measured with GDP per capita and the donor interests were presented with the UN votes index and a colony dummy. They included three policy variables: the Sachs-Warner trade openness index, democracy and political rights reported as 1 corresponding to an autocratic government 7 corresponding to a democratic government and corruption index from the ICRG (international country risk guide) to measure the corruption level of the recipient country's government. Their results showed that, in general, donors do not punish the recipients with less aid based on a consideration of the level of corruptness. However, they, noted that Scandinavian countries did reward less corrupt governments. Neumayer (2003) studied whether human rights mattered in bilateral aid allocation with a panel data set consisting of 21 donor countries from 1985 to 1997. They used a two-stage model combining a Probit estimation of the first stage and an OLS estimation of the second stage. Both stages were estimated with the same variables. They used GDP per capita as the need variable. The value of export to recipient countries is used as an economic interest variable. Political interests were included with a colony dummy, the military aid share of the US total aid. Two human rights variables were the main interest. These are personal integrity rights which are the core human rights measured with the Purdue Political Terror Scales (PTS) and political/civil rights which were measured with the combined political rights and civil liberties index from Freedom House. However, they did not include any variables measuring institutional quality or corruption. The results indicated a failure to promote respect for human rights in a consistent manner for most donor countries' aid allocation decisions.

They stated that this result was also applicable to the countries that are commonly regarded as those committed to human rights (Canada, Denmark, the Netherlands, Norway, and Sweden).

On the other hand, Berthélemy and Tichit (2004), found that good social and economic performance is rewarded by donors while allocating bilateral aid, using a three dimensional model of 22 donor countries during 1980–1999. They estimated one equation including the independent variables as well as the same independent variables multiplied by a dummy for each donor. This method provided donor-specific parameters as well as general parameters. They used the random effects Tobit estimator. Recipients' needs are again measured by GDP per capita, however, they had a different selection on policy variables than what was in the general literature. They measured policies with GDP growth rate, FDI, school enrollment and infant mortality rate. GDP growth rate, school enrollment and infant mortality variables are more likely to capture needs and vulnerability rather than policy quality. The mean of civil liberties and political right indexes developed by Freedom House is one policy variable used which is similar to the variables capturing democracy and human right that are consistently used in the literature. Alongside with the colony dummies, sum of import and export value as a share of donors GDP was included as an interest variable. Trade links were found to be significant but small in magnitude.

Gates and Hoeffler (2004), analyzed the difference between Scandinavian countries and other big donors by using the OLS and Tobit methods to estimate the aid allocation for different donors in 1980 – 1999 separately. They argued that Scandinavian countries, especially Norway, did not provide more aid to political allies as the variable based on UN voting patterns was insignificant. Instead they rewarded democracy, measured using the Polity IV data set.

Dollar and Levin (2006) investigated the rise of selectivity in foreign aid allocation, which means determining whether donors provide more aid to countries with better policies supporting effective aid use. The International Country Risk Guide (ICRG) rule of law index and the Freedom House democracy index were chosen as the policy variables and recipients' needs were measured by GDP per capita. The results from their separate pooled Tobit models of 22 donor countries showed that aid used to target countries with poor economic governance shows a strong negative relationship between property rights/rule of law and aid flows during 1984–1989. In contrast to earlier periods, they argued that this relationship changed significantly during 2000–2003. While multilateral assistance had a strong positive relationship with the rule of law, bilateral aid did not have any significant relation during a similar period 1999-2002. Institutional quality of recipient is not important in aid allocation while need and democracy is for all periods.

Nunnenkamp and Thiele (2006) assessed the aggregate aid allocation from all DAC countries and nine big donors measuring policy variables with the Kaufmann indexes of rule of law, voice and accountability, and control of corruption. However, after using these variables separately for a correlation analysis, they switched to a composite index consisting of all policy variables for the rest of the analysis. First, a qualitative analysis based on comparing absolute aid shares to countries with different levels of policy quality and income levels was done. However, this framework requires the dependent variable to be presented in total values instead of per capita, and the interpretation might be affected by size, as larger countries receive larger amounts of aid. Then they estimated a Tobit model for year 2002 and concluded that none of the major donors responded to changes in policy quality even though most bilateral donor countries and multilateral institutions prioritized relatively poor countries in their decisions to allocate aid. In addition to these results, they also claimed that donors failed to allocate more aid to the recipients that increasingly opened up to trade, as measured by a trade openness index which is defined as the sum of export and import.

Similar results were presented by Hoeffler and Outram (2011), analyzing aid flows from 22 donor countries between 1980-2004. They estimated aid from all donors in one equation using donor dummies, as also seen in Berthélemy and Tichit (2004). However, they chose fixed effects as their method. In addition to this regression they ran separate regression for individual donor countries using a fixed effects method for some donors and OLS for others. They added aid from other donors as a need variable alongside GDP per capita. This approach could be flawed since the other donors might have other motivations for allocating aid besides being based on needs. GDP per capita growth, democracy measured by the Polity IV dataset, human rights violations based on information by the US State Department and Amnesty International were used as policy variables. The sum of export and import as the share of donor GDP is added as the trade interests, while UN vote count index included as a political interest variable. The results did not show strong evidence of donors distributing aid considering the merits of the recipient. Rather they found that donors allocated aid considering their self-interest which includes them giving more aid to their trade partners as well as taking the needs of the countries into consideration, as represented by per capita income. The unobserved country-specific effects were found to have a significant effect on aid allocation, suggesting that there is still a poor understanding of donor behavior. Younas (2008), studied the aid flow from 22 donor countries during 1992–2003 using OLS estimation, asking whether aid is allocated to gain trade benefits. They used infant mortality as well as GDP per capita to measure recipients' needs. The only variable capturing policy quality is presented as human rights

measured by the combination of political rights and civil liberties indexes produced by Freedom House. They had a wide range of variables capturing trade interests since it is the main motivation for the aid allocation they were analyzing. These variables consisted of a general import variable, measured as import from the donor country as a share of their GDP, as well as import of basic manufacturing goods, machinery and transportation equipment, and the agricultural sector output, as a share of general imports. They found that machinery and transportation equipment variable had a positive and significant coefficient and argued that aid flows from donor countries were allocated in favor of the countries with a tendency of importing the goods in which donors have a comparative advantage.

Another aid selectivity assessment was done by Clist (2011), covering 1982 to 2006. He used a framework dividing the motives of donor countries into four categories: poverty (GDP per capita), policy, proximity and population. This framework is similar to the earlier literature in the way that it includes the need (poverty), policy and donor interests (proximity). The policy variables were introduced as the freedom index of Freedom House and PTS (political terror scale). They used a two-stage model where the first stage is estimated using the Probit and the second using OLS. He found that poverty sensitivity has slightly increased for most of the donors. Yet the level of good governance does not have a major effect on the allocation decisions. The results supported the case that there has not been an improvement in aid selectivity through recent years.

Even though most of the important studies were done to a large extent including multiple donor countries, there are some recent studies that address the aid flows from one specific country. These studies included Cooray and Shahiduzzaman (2004), who studied Japanese aid allocation decisions, and Faust (2012), who studied German aid allocation decisions. Cooray and Shahiduzzaman (2004) studied Japan's bilateral ODA allocation between 1981 and 2001 using OLS estimation method. Similar to multi-donor studies they also measured recipients' needs with GDP per capita. The policy variable, an index for freedom of democracy is an un-weighted sum of political right and civil liberty indexes taken from Freedom House's Freedom of the World Survey. Export and import values of Japan to recipient countries were used as a proxy for trade interests. They concluded that Japanese aid allocation decisions depended on national interest. They also obtained a positive coefficient for GDP per capita and negative for squared GDP per capita and argued that Japan pays attention to recipient country needs only after a threshold. Faust (2012) analyzed German aid allocation in two periods: 1992–1999 and 2000–2007. The two-stage aid allocation model is used where the first stage is estimated using a Logit method that is different than the Probit method used in other

papers. The second stage is estimated with OLS and GAM methods. They analyzed aid channeled through the Federal Ministry for Economic Cooperation and Development (data only available from 2000) as well as total aid of Germany. Even though they used GDP per capita as the measurement of need they did a robustness check with infant mortality and showed the results are similar. They found that neediness and democracy levels are statistically significant using the Worldwide Governance Indicators' Voice and Accountability as a proxy for policy quality. Trade interest were measured with the sum of export and import and variables such as UN votes, distance and a war dummy were added to represent political interest. Their results showed no evidence of economic or political self-interest effecting the aid allocation and they found significant evidence that recipients' needs and good policies affect German aid allocation.

A recent study by Dreher et al. (2015) adds to the literature on aid allocation by focusing on the political and ideological interests of Germany. They concluded that political interests affect German aid allocation regardless of the political ideology of the government. In contrast to this study, political and ideological interests are not a focus in this thesis since those interests seem to be not significant in Norway's case. Even though Norway's own interests has been analyzed as a motivation to give aid for example in Stokke (1989), this has been done mostly on the economic interests rather than the classic approximation criteria used for other donors including colonial history or language ties.

The only study dealing with the allocation of aid-for-trade to my knowledge is an unpublished paper by Tadasse and Fayissa (2009). Despite using a different framework which drives a model based on a utility function which would be maximized by the donor following a Nash equilibrium. They also assess the US aid allocation while asking whether the US rewards good policies and accounts for the neediness of recipients or whether they are motivated by trade benefits. These are also questions asked in this thesis. Their results from Tobit model estimation showed that both recipients' needs and policies are relevant to US aid-for-trade allocation as well as the self-interest of the donor.

There is something of a consensus in the literature on measuring the needs of the recipient countries by GDP per capita. However, there is not a consensus on how to measure the policy quality. There are different policy criteria used in different studies as well as different indexes to measure them. The measurement of interest also shows differences due to different attributes of the focus countries. The results also vary quite largely depending on the donors or the period of studies.

Chapter 4. Data and Methodology

4.1 Data and Variables

A panel data set is constructed consisting of all developing countries in the list of eligible recipients of ODA by OECD between 2005 and 2014. Those countries whose data are incomplete are excluded from the set (Djibouti, Eritrea, Guinea Bissau, Lesotho, Libya, North Korea, Papua New Guinea, Syria, Somalia, Turkmenistan and some small island countries). Countries which were included or excluded from the eligibility list for reasons such as independence or improvement in economic development during the study period (Kosovo, Montenegro, Serbia, South Sudan and Croatia) were also excluded.

The dependent variable is the value of Norway's bilateral aid-for-trade in per capita terms. The aid-for-trade values are calculated by applying a similar framework as the OECD's definition explained in chapter 2. The values consist of the disbursements from Norway including the categories "Economic Development and Trade" and "Energy" which is a sub-category of "Environment and Energy" accessed from NORAD's aid database (NORAD 2016). There is no consensus on whether it is better to use aid disbursements or aid commitments as the dependent variable. Some studies argue that using commitments is a good strategy claiming that they represent the initial decisions of donors (Berthélemy & Tichit 2004; Cooray & Shahiduzzaman 2004). However, this thesis uses disbursement data in line with other studies (Faust 2012; Nunnenkamp & Thiele 2006) because the decision on whether to implement the aid allocation reflects an important decision-making process. Another decision is to use either per capita aid allocated or the total amount of aid allocated as the dependent variable. This is another question whose answer does not have consensus either. Using the total amount of aid allocated comes with difficulties for interpreting the results because the absolute aid allocations are effected by the size of the recipient countries. Thus, the per capita approach is chosen for the analysis. The negative net disbursements in the data set are replaced with zeros due to the log transformation of the variable. This would prevent the analysis from taking the negative net disbursement account; however, this should not be a major problem since the focus of this thesis is on the motivations of giving aid rather than on the decision-making process of countries repaying the loans associated with the aid.

The independent variables are categorized into three motivation groups: recipients' needs, recipients' merits and donor's interest. The needs of recipients are represented by GDP per capita of the recipient country as it is commonly used in aid allocation literature. GDP per capita data are obtained through the World Bank database (World Bank 2016g). The

measurement of poverty and neediness through GDP per capita is limited since it does not include the issues such as income distribution or reflect the standards of living fully; however, a poverty index is not largely available for the panel data set of this thesis. The coefficient of GDP per capita is expected to be negative if Norway allocates aid-for-trade with a motivation to prioritize the poorest countries. Infant mortality, which is another need variable suggested by the literature, is not used, following the argument that rich countries with high infant mortality rates should be able to support their citizens without development aid (Faust 2012).

The merits of the recipients are represented by the Worldwide Governance Indicators developed by Kaufmann et al. (2011) which were accessed through the World Bank database (World Bank 2016h) . The rule of law and control of corruption indicators are used to take institutional quality and the fight against corruption into account. However, the control of corruption indicator was excluded from the model due to a high correlation with the rule of law index. The rule of law index captures the trust of agents in implementing the rules of society and the ability to enforce them, as well as the effectiveness of institutions, for example the quality of contract enforcement, property rights, the police, and the courts. It also captures the likelihood of crime and violence. The sign of the coefficient is expected to be positive if the good governance and the fight against corruption is rewarded by Norway. The voice and accountability index is added as a proxy for the level of efforts on improving democracy and human rights. The voice and accountability index captures the ability of citizens to participate choosing their government, to have freedom of expression and freedom of association, as well as to communicate through a free media. If the recipient countries are rewarded based on their efforts on democracy and human rights the coefficient of the voice and accountability variable is expected to be positive. As a control for the special cases of violence and terrorism, political stability and absence of violence/terrorism index is also added from the same indicator set. This index captures the likelihood of the government to suffer from unconstitutional and violent means and politically motivated violence as well as terrorism. Each of these three policy variables have a value that ranges from -2.5 to 2.5 where the higher values indicate a better score and quality of policy.

Asking whether Norway prioritizes the countries which commit to integrating into the global market is relevant because the aim of aid-for-trade is to integrate developing countries in the world market. Therefore, a trade openness index (the share of sum of export and import value as a percentage of recipient country's GDP) is obtained through the World Bank database (World Bank 2016i). The trade openness values for Ethiopia, which is one of the top recipients of Norwegian aid-for-trade, was not available in the World Bank data set. The estimated values

for 2005-2010 were obtained by rescaling the data from another source (Knoema 2017) using overlapping values of each data source. There were missing values of Cuba's GDP and a missing value for its trade openness in 2014. Cuba's trade openness index in 2014, as well as Cabo Verde's trade openness index which was also missing, were computed by applying the average growth rate during the whole period.

The donor interest dimension of the motives is presented by the export value of Norway to the recipient country. This variable gave the same results compared with the one represented as the share of recipient country's GDP as used by Berthélemy (2006) in a model by which he was able to produce similar results to those using the sum of import and export as the share of recipient GDP (Berthélemy & Tichit 2004; Hoeffler & Outram 2011). The export data from Norway to the recipient countries from UN Comtrade database (UN 2017) is missing some years for some of the recipients. These missing entries are registered as zero exports in those years. Sudan is an exception to this since South Sudan's independence in 2011 could have influenced data reporting and these values are suspicious as a zero entry for exports, and more likely to be missing values. Therefore, Sudan is excluded from the panel data set.

Membership to regional trading agreements are added as control dummy variables. The agreements where the information is available to account for changes in membership through the years are included as dummies⁶. These are SADC (South African Development Community), APEC (Asia-Pacific Economic Cooperation), ECOWAS (Economic Community of West African States), and Mercosur (South American Common Market). These dummy variables take the value of one if the recipient country is a member of the correspondent regional agreement for that year and zero otherwise. Another control variable, of a country being landlocked, is introduced since the trade costs are significantly higher for landlocked countries and this may lead donors to give more aid-for-trade to those countries to compensate for those costs (Tadasse & Fayissa 2009). This dummy variable takes the value of one if the country is on the UN list of landlocked countries and zero otherwise⁷.

Gates and Hoeffler (2004) argued that political interests are not a motive for Norway. The literature which aggregated Scandinavian countries mostly found that political interests variables for Scandinavia are insignificant (Alesina & Dollar 2000; Clist 2011). Additionally,

⁶ The information regarding membership to SADC was retrieved from SADC (2012) ; to APEC was retrieved from APEC (2017) ; to ECOWAS was retrieved from ECOWAS (2016); and to Mercosur was retrieved from CFR (2017).

⁷ The list of landlocked countries was retrieved from UN (2014) .

Norway has no history of colonies, therefore, the variables related to colonies or other political interests were not included.

Figure 1 shows the heavily left skewed distribution of the dependent variable, aid-for-trade per capita. The monetary variables aid-for-trade per capita, GDP per capita and Norwegian export had left skewed distributions and their logarithm distributions were closer to normal. Having variables with distributions closer to the normal distribution helps obtain residuals that are more symmetrically distributed. Therefore, aid-for-trade per capita, GDP per capita and the value of Norwegian exports are included in the model as logarithm transformations. A small shift of 0.00008 and 10 are added to all observations of aid-for-trade per capita and Norwegian export variables, respectively, in order to do a log-transformation, since it is not possible with the zero values. This approach was also taken in Alesina and Dollar (2000).

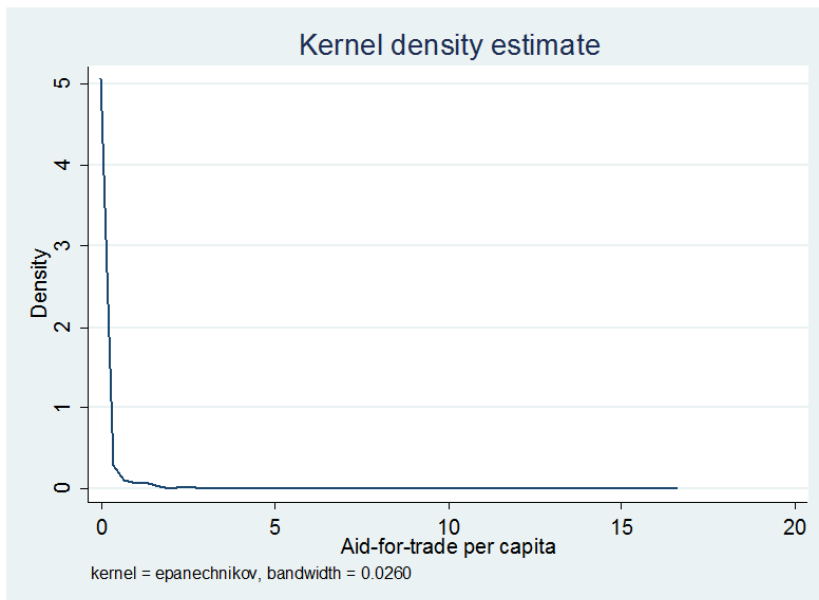


Figure 1. Kernel Density Estimate of Aid-for-Trade Per Capita

4.2 Summary Statistics

Table 9 presents the summary statistics of dependent and independent variables by regions. The Middle East had the largest average per capita aid-for-trade received, amounting to \$2.5. This amount was nearly six times larger than what recipients in Asia and Africa received. The standard deviation of aid-for-trade per capita is very high for the Middle East due to the boost in the aid-for-trade flow to Palestine from 2007 and the other four countries not having received aid for a few years. The Americas had a very low per capita value compared to the others, receiving only \$0.10 per capita.

Table 9. Summary Statistics

| Indicators | Regions | Africa | Americas | Asia | Europe | Middle East |
|--|---------|--------|----------|-------|--------|-------------|
| Aid-for-trade per capita (USD): | | | | | | |
| No. of observations | | 440 | 290 | 260 | 70 | 50 |
| Mean value | | 0.39 | 0.14 | 0.41 | 0.30 | 2.53 |
| Standard deviation | | 0.97 | 0.47 | 1.10 | 0.38 | 5.32 |
| GDP per capita: | | | | | | |
| No. of observations | | 440 | 290 | 260 | 70 | 50 |
| Mean value | | 2715 | 6539 | 2708 | 4742 | 4893 |
| Standard deviation | | 4060 | 3693 | 2467 | 2577 | 1852 |
| Norwegian export value to the recipient country (million USD): | | | | | | |
| No. of observations | | 440 | 290 | 260 | 70 | 50 |
| Mean value | | 28 | 46 | 138 | 138 | 11 |
| Standard deviation | | 71 | 137 | 451 | 245 | 13 |
| Index score for rule of law: | | | | | | |
| No. of observations | | 440 | 290 | 260 | 70 | 50 |
| Mean value | | -0.61 | -0.33 | -0.63 | -0.49 | -0.66 |
| Standard deviation | | 0.60 | 0.73 | 0.55 | 0.35 | 0.68 |
| Index score for voice and accountability: | | | | | | |
| No. of observations | | 440 | 290 | 260 | 70 | 50 |
| Mean value | | -0.56 | 0.20 | -0.77 | -0.28 | -0.94 |
| Standard deviation | | 0.67 | 0.67 | 0.66 | 0.57 | 0.40 |
| Index score for trade openness: | | | | | | |
| No. of observations | | 440 | 290 | 260 | 70 | 50 |
| Mean value | | 81 | 31 | 86 | 97 | 88 |
| Standard deviation | | 39 | 22 | 43 | 26 | 30 |

African and Asian countries had very similar GDP per capita, both around \$2700, on average, which is the lowest among all regions. Africa has the largest variation of income per capita values compared with the other regions. Despite the large deviation in aid-for-trade per capita the Middle East has the lowest variation in the income per capita values. Which can indicate that Middle Eastern countries were allocated aid-for-trade according to special circumstances rather than their income level. The Americas has an average of \$6539 income per capita, which is quite large compared to the other regions.

The Middle East and Asia had the poorest scores, both on the rule of law and voice and accountability. African countries had a similar score to the countries in these two regions for

rule of law; however; they scored higher for voice and accountability. Countries in the Americas scored highest for both variables. Europe had the highest trade openness value with an average of 97. Asia and the Middle East came second with very similar openness values over 85. However, Asian countries varied more in the level of openness. Africa had a lower average score of 81 and the countries of the Americas had a significantly low score of 31.

The top regions with exports from Norway were Asia and Europe, averaging \$138 million per year, yet Asia had a larger variation of export values. The average value exported to Asia and Europe was more than double of what was exported to the Americas. Exports to Africa and the Middle East were very small compared to the others, which were, respectively, \$28 and \$11.2 million and had smaller variations than the rest of the regions.

Africa and Asia which are the regions with the most need is more prioritized compared to the Americas, the region with the best policies and the highest income per capita. This information suggests that based on regional distribution, Norway is more concerned with recipients' needs than merits. However, the aid flow to the Middle East is larger than that of Africa and Asia. The fact that these two regions have lower incomes than the Middle East indicates that recipients' needs might not be the most important determinant for allocation.

The correlations among the non-transformed variables of interest are presented in Table 10. The correlation results show that the only independent variables correlated to the dependent variable are GDP per capita and trade openness. However, the correlation coefficients of these variables are small. GDP per capita has a correlation coefficient of 0.1 and the correlation coefficient of other variables are all lower than 0.1. The direction of GDP per capita is negative as expected. Norwegian export value is negatively correlated showing no evidence of seeking trade benefits. Lastly, the policy variables show a negative correlation for rule of law, voice and accountability, as well as a negative correlation for trade openness. These correlations do not necessarily reflect the real relationship between these variables and aid allocation since a simple correlation does not signify causation or account for the changes through time.

Table 10. Correlations with Aid-for-Trade Per Capita

| Variable | Statistical significance |
|--------------------------|--------------------------|
| GDP per capita | -0.137* |
| Rule of law | -0.019 |
| Voice and accountability | -0.005 |
| Trade openness | 0.062* |
| Norwegian export value | -0.057 |

Note: * refers to significance at the 5% level

4.3 Method

Since this thesis analyses a specific kind of aid, the values are smaller compared to the values of other studies use in the literature and there are a lot more recipient countries that received no aid for specific years or during the entire period. This problem hinders the possibility of obtaining robust results by using a linear model.

The research questions are going to be analyzed by using a quantitative and a qualitative method. The analysis in the quantitative method will be done by using two models: a fixed effects model and a random effects Tobit model. These models both have different limitations. The random effects Tobit model is an appropriate choice since it has the ability to take the two-step nature of aid allocation into account. However, the possible correlation between unobserved effects and observed explanatory variables may warrant the use of a fixed effects model. Unfortunately, a robust fixed effects maximum likelihood estimator is not available for Tobit. A linear fixed effects model was estimated to take the possible fixed effects into account. In addition to these two models, two random effects models were estimated to compare to the fixed effects model. This comparison was used to see the consequences of neglecting the fixed effects because the Tobit model is estimated with the random effects maximum likelihood estimator. First, a random effects model with the same variable set used in the fixed effects model was estimated. Later, some variables which could capture some of the fixed effects were added to a second random effects model and these three linear models were compared. In addition, a qualitative method is used to retrieve more information out of the available data.

4.3.1 Fixed Effects Model

The fixed effects are the country-specific variables which capture unobserved and time-constant factors that affects the dependent variable. The fixed effects model accounts for country-specific effects using deviations from group means.

The linear fixed effects model is

$$Y_{it} = \alpha + \beta X_{it} + w_i + e_{it} \quad (4)$$

where i stands for the recipient and t stands for the year, Y is the dependent variable, X is the vector of the independent variables, α is the intercept, β is the vector of the parameters, w_i is donor-yearly effects and e_{it} is a disturbance term. The fixed effects model transforms equation (4) into equation (5) by subtracting the means of variables through time from the variable itself:

$$Y_{it} - \bar{Y}_i = \alpha - \alpha + \beta(X_{it} - \bar{X}_i) + w_i - w_i + e_{it} - \bar{e}_i$$

$$\tilde{Y}_{it} = \beta \tilde{X}_{it} + \tilde{e}_{it} \quad (5)$$

where $\tilde{Y}_{it} = Y_{it} - \bar{Y}_i$, $\beta \tilde{X}_{it} = \beta(X_{it} - \bar{X}_i)$ and $\tilde{e}_{it} = e_{it} - \bar{e}_i$. This allows the time independent variable to be excluded from the equation.

The fixed effects model requires four assumptions to produce consistent estimates. The first assumption is that the population model is linear in estimates. The second assumption is that the data are obtained by random sampling. The third assumption is there should not be an exact linear relationship between independent variables. The last assumption is that there is strict exogeneity which means that the expected value of the error terms should be zero conditioned to both independent variables and unobserved effects.

If the fixed effects are ignored the model will have an omitted variable problem. As a result, the independent variables can be correlated with the error term if the fixed effects and other independent variables are correlated. This endogeneity problem causes the estimates to over or underestimate the effect of another independent variable (Wooldridge 2012).

However, as McGillivray (2003) argued, this method may have a bias due to failing to take into account the two-step nature of aid allocation. The zero values in the data are an outcome of a selection process determined by the explanatory variables which are not independent from the second stage. For example, if the zero values in the sample correspond to a higher value of an independent variable X than the positive values, then the zero observations will lie at the right side of the axis and form part of the positive values, causing the regression line to be flatter and coefficient to be underestimated.

4.3.2 Random Effects Model

The random effects model treats the country-specific effects as random variables. The difference between the fixed effects and random effects is that the country-specific effects in the data are treated as they are uncorrelated with the explanatory variables.

The random effects model transforms the same unobserved effects model in equation (4) by subtracting the θ portion of the means of variables and yields

$$\check{Y}_{it} = \beta \check{X}_{it} + \check{e}_{it} \quad (6)$$

where $\check{Y}_{it} = Y_{it} - \theta \bar{Y}_i$, $\beta \check{X}_{it} = \beta(X_{it} - \theta \bar{X}_i)$ and $\check{e}_{it} = e_{it} - \theta \bar{e}_i$ and $\theta = 1 - (\sigma_u^2 / (\sigma_u^2 + T\sigma_w^2))^{1/2}$ such that $\sigma_w^2 = var(w_i)$, $\sigma_u^2 = var(u_{it})$ for years $t = 1, 2, \dots, T$.

In order for the random effects model to be consistent, the unobserved effects have to be uncorrelated with the explanatory variables.

4.3.3 Tobit Model

The Tobit model is utilized in many aid allocation studies (Berthélemy & Tichit 2004; Dreher et al. 2015; Nunnenkamp & Thiele 2006; Tadasse & Fayissa 2009). The model estimates both processes in one step, taking truncation in account. This model uses the same set of variables to estimate both probability of receiving aid and the amount of aid allocated. It assumes these variables affect both the decision-making process and the endogenous selection of the recipients. The Tobit model uses maximum likelihood estimation. This estimation method maximizes a likelihood function consisting of two parts, the first part corresponding to the classical regression for the non-truncated observations and the second part corresponding to the probability of an observation being truncated.

The latent dependent variable in the Tobit model is

$$Y = \begin{cases} Y^*, & \text{if } Y^* > K \\ 0, & \text{if } Y^* \leq K \end{cases} \quad (7)$$

where Y^* is the structural equation of $Y_{it}^* = \beta X_{it} + e_{it}$ and K is the cut off value of the truncated data.

The Tobit model also requires six assumptions to produce consistent estimates. The first assumption is the population model is linear in estimates. The second assumption is that data are obtained by random sampling. The third assumption is there should not be an exact linear relationship between independent variables. The fourth assumption requires that the expected values of errors to be zero conditional to the independent variables. In contrast to the fixed effects estimator, the Tobit estimator is consistent only if the errors are homoskedastic and normally distributed.

However, this model does not control for fixed effects and there is no model specification that is unbiased when removing the fixed effects from the Tobit model. As a result of this limitation the effect of independent variables can be over- or under-estimated and the significance of the variables could be questionable (Wooldridge 2012).

In addition to these methods, there are alternatives of models estimates in two stages. A two-stage model similar to the approach taken in Hoeffler and Outram (2011) and Neumayer (2003) has a Probit estimation of the probability of receiving aid as a first stage, and a linear estimation with positive observations of the amount of aid allocated as a second stage. However, this type of model relies on the assumption that the choice of the recipient to give aid is independent from the decision on the amount of aid allocated, which is argued to be not realistic (Berthélemy & Tichit 2004) and there is not a specific statement by MOFA in the aid-

for-trade action plan indicating the use of different criteria while allocation aid-for-trade. Another alternative is to estimate the Heckman's two-step method. This method corrects the selection bias through the inverse Mill's ratio. This ratio is obtained from the first step and is added as an explanatory variable in the second step to correct for selection bias. However, this model is not considered in this thesis because the Heckman method requires a different set of independent variables for each stage due to multicollinearity issues. As many studies argued (Berthélemy & Tichit 2004; Clist 2011; Hoeffler & Outram 2011; Neumayer 2003), it is hard to find independent variables which explain the first stage but do not explain the second stage.

4.3.4 Specific Models

The fixed effects model is estimated as,

$$\ln(AFT)_{it} = \alpha + \beta_1^{fe} \ln(GDP)_{it} + \beta_2^{fe} (RoL)_{it} + \beta_3^{fe} (VaA)_{it} + \beta_4^{fe} (TO)_{it} + \beta_5^{fe} (PSV)_{it} + \beta_6^{fe} \ln(EX)_{it} + e_{it} \quad (8)$$

where, *AFT* is aid-for-trade per capita in US dollars, *GDP* is GDP per capita in US dollars, *RoL* is a rule of law index, *VaA* is a voice and accountability index, *TO* is a trade openness index, *PSV* is a political stability and absence of violence/terrorism index, *EX* is Norway's export value to the recipient country in US dollars, α is the constant term and e_{it} are the residuals.

As argued earlier, two random effects model are estimated to observe the existence and effects of fixed effects. First, a random effects model with the same set of variables to the fixed effects model is equation (8) is estimated. Then, a second random effects model is estimated adding the dummy variables to capture some of the unobserved effects as in equation (9).

$$\ln(AFT)_{it} = \alpha + \beta_1^{fe} \ln(GDP)_{it} + \beta_2^{fe} (RoL)_{it} + \beta_3^{fe} (VaA)_{it} + \beta_4^{fe} (TO)_{it} + \beta_5^{fe} (PSV)_{it} + \beta_6^{fe} \ln(EX)_{it} + \beta_7^{fe} (SADC)_{it} + \beta_8^{fe} (APEC)_{it} + \beta_9^{fe} (ECOWAS)_{it} + \beta_{10}^{fe} (MERCOSUR)_{it} + \beta_{11}^{fe} (LL)_{it} + e_{it} \quad (9)$$

where SADC is the dummy of membership to South African Development Community, APEC is the dummy of membership to Asia-Pacific Economic Cooperation, ECOWAS is the dummy of membership to Economic Community of West African States, Mercosur is the dummy of membership to South American Common Market and LL is the dummy of landlocked countries. These dummy variables are used only with the intent of capturing some of the unobserved effects and observing the effects of this on the results. The fixed effects model is unable to include these variables due to the time invariant nature of them (memberships to the agreements do not change in the duration of this study except for Venezuela's membership to

Mercosur). Since this is the case, there is no information about the possible bias of the coefficients or significance of these variables due to the fixed effects. Therefore, these dummy variables are not going to be interpreted.

Lastly, a Tobit model is estimated with the variable list including the dummy variables since they account for some of the fixed effects. The Tobit model estimates equation (9) with a latent dependent variable as,

$$\ln(AFT) = \begin{cases} AFT^*, & \text{if } AFT^* \geq 0.0000932 \\ 0, & \text{if } AFT^* < 0.0000932 \end{cases} \quad (10)$$

where 0.0000932 is the cut off value of the truncated data. The results of various estimations are presented in chapter 5.

Chapter 5. Empirical Results and Qualitative Analysis

5.1 Linear Models

An OLS regression is estimated and tested for serial correlation which showed evidence that there is serial correlation. This result is an indication the possibility of some unobserved effects. A CRE (correlated random effects) regression was used as a testing device to see if these effects are fixed or random. First, the means for independent variables by recipient countries were generated. Then they were added to a random effects regression alongside with the original independent variables. These variables were collectively different from zero at only a 10% significance level. However, the mean independent variables of GDP per capita and voice and accountability were found to be significant at the 5% significance level. This indicates that there might be correlated individual effects, which violates the assumption that the unobserved effects are not correlated, which is a necessary condition for the random effects model. If the unobserved effects are fixed, the random effects estimator will produce inconsistent estimates. If assumption of uncorrelated unobserved effects is not violated both models provide consistent estimates. In light of this, it was decided that a fixed effects model was to be estimated alongside the Tobit model to account for unobserved fixed effects.

As discussed before, the random effects models were used to test whether the unobserved effects are random or fixed and to see how the results are effected by treating fixed effects as random. The results show that the random effects model, including dummy variables, yields more similar results to those in the fixed effects model and the errors within the recipient countries have a smaller variance. This result also supports that the unobserved effects are fixed rather than random. This result is similar to those found by Hoeffler and Outram (2011) who argued that country specific effects have a strong effect on aid allocation.

Tests were run for serial correlation, heteroscedasticity, functional form and normality for each of the three models. The test results from the three models were very similar to each other. First, to test for the serial correlation, the residuals of the model are regressed with the lag of the residuals and see whether the lagged residuals are significant. The lagged residuals were all significant with a p-value of 0.000 for each model. This shows an evidence of serial correlation in the models. Therefore, robust standard errors were used for estimation. The Ramsey-RESET test was run to test for a misspecified functional form. The square of fitted values of the dependent variable are added to each regression. These p-values correspondent to the fixed effects model, the random effects model, and the random effects model with

dummy variables were 0.789, 0.321 and 0.164, respectively. These values showed no evidence of a misspecified functional form.

The kernel distribution and scatter plots of residuals with the fitted values of the dependent variable is presented for each model in Figure 2. To test for heteroscedasticity a scatter plot of fitted values of the dependent variable on the y axis and residuals on the x axis is created for each model. The scatter plots do not show a very strong and clear pattern of changes in the variance correlated to the fitted values. However, there are some outliers and slight changes in the variation of residuals which could be some evidence of heteroscedasticity. The distribution of residuals show some similarities to normal distribution and they are not skewed; however, they have very long and thin tails and most of the errors are concentrated around the mean.

Serial correlation, heteroscedasticity and non-normality of errors do not have an effect on the coefficients and also the effects of those on inference is accounted by using robust standard errors. However, as discussed in the methods section, due to the truncated data, the fixed effects or random effects models might produce over or underestimated coefficients and produce unreliable p -values.

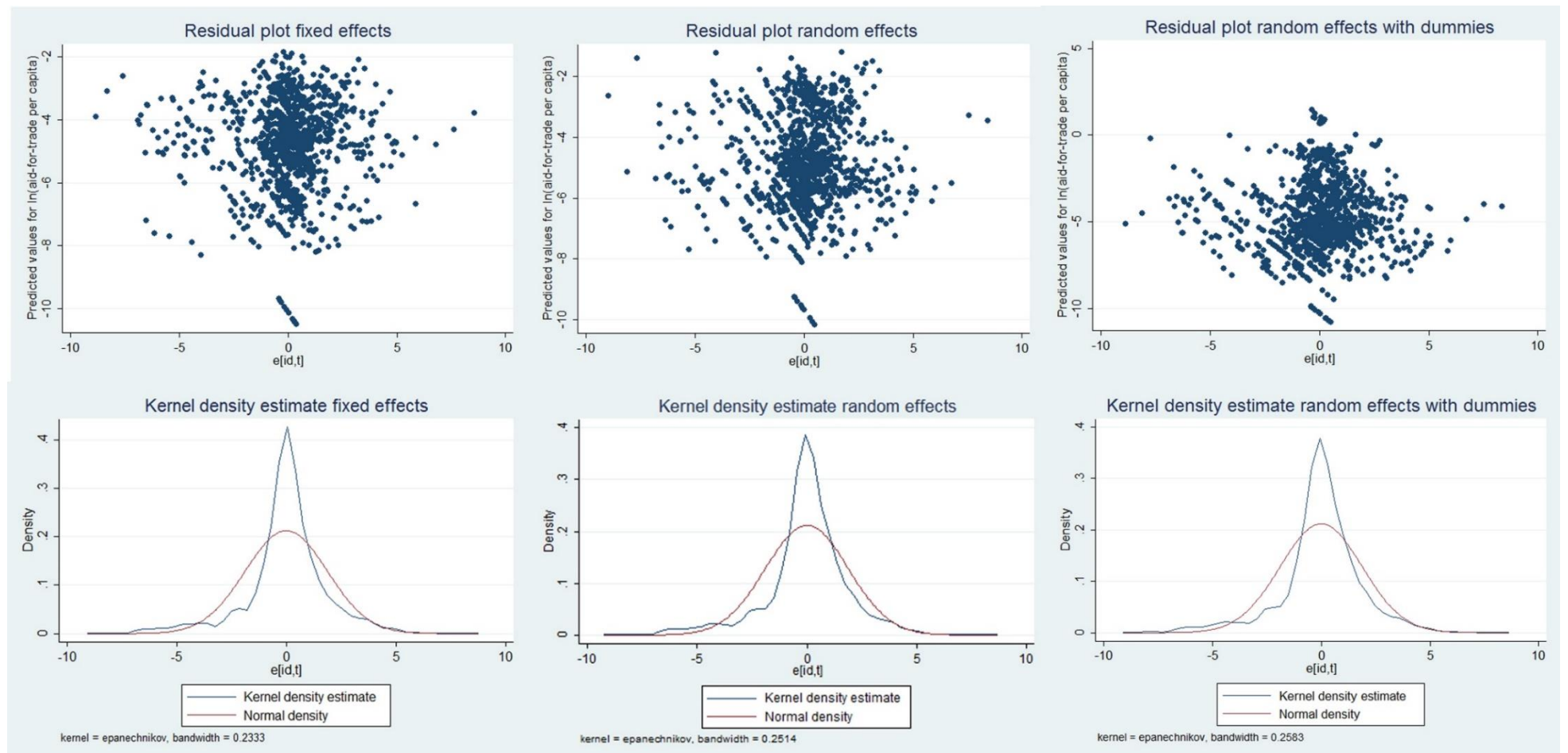


Figure 2. Homoscedasticity and Normality Test Results

Table 11 presents the results of the fixed effects, random effects, and the random effects model with additional dummy variables. The comparison of these three models show that there is no evidence of individual effects changing the signs of the coefficients since all three models have the same signs for each variable. GDP per capita appears to be significant in the random effects models and are not significant in the fixed effects model, which suggests that fixed effects might cause GDP per capita to look significant while actually it is not.

Table 11. Estimation Results of the Linear Models

| Independent variables | Fixed effects | Random effects | Random effects with dummies |
|--|-------------------|--------------------|-----------------------------|
| LN (GDP per capita) | -1.037 (1.431) | -1.432* (0.278) | -1.353* (0.311) |
| Rule of Law | 0.678 (0.630) | 0.552 (0.448) | 0.414 (0.448) |
| Voice | 1.407* (0.435) | 0.641 (0.342) | 0.827* (0.314) |
| LN (Norwegian Export) | 0.020 (0.061) | 0.023 (0.059) | 0.040 (0.064) |
| Trade Openness | -0.005 (0.008) | -0.002 (0.006) | -0.003 (0.006) |
| Political Stability and absence of violence/terrorism | -0.400 (0.378) | -0.354 (0.334) | -0.379 (0.332) |
| South African Development Community (SADC) dummy | | | 1.999* (0.631) |
| Asia-Pacific Economic Cooperation (APEC) dummy | | | 1.021 (0.738) |
| Economic Community of West African States (ECOWAS) dummy | | | -1.817* (0.909) |
| South American Common Market (Mercosur) dummy | | | -1.016 (0.815) |
| Landlocked country dummy | | | 2.020* (0.655) |

Notes: * implies statistical significance at the 5% level. Standard errors in parentheses.

Some variables such as trade openness, Norwegian export and, the political stability and absence of violence/terrorism index are underestimated while the rule of law index, the

voice and accountability index and GDP per capita are overestimated in the random effects model.

The interpretations of the results differ from each other since some variables are in log form. Since the dependent variable is in the log form the beta coefficient represents the effect of the original metric variable on the log of aid-for-trade per capita. While interpreting the effect of original variables on log dependent variable, the coefficient will not show the direct unit change on aid-for-trade per capita. The effect of this coefficient on the real variable can be calculated as $\beta = \ln(Y_2/Y_1)$, which when transformed back is $e^\beta = 1 + (Y_2 - Y_1)/Y_1$, where $\ln(Y_1) = \beta X$ and $\ln(Y_2) = \beta(X+1)$. The change $(Y_2 - Y_1)/Y_1$ is equal to $(e^\beta - 1)$ and yields the percentage change, $(e^\beta - 1) * 100$ which is equal to $\beta * 100$. Therefore, one unit change in the independent variable will lead to a $\beta * 100$ percent change in the dependent variable keeping all other variables constant.

Secondly, while interpreting the effect of change in a log independent variable on a log dependent variable the effect can be calculated as $\beta \ln(1.01) = \ln(Y_2/Y_1)$, where $\ln(Y_1) = \beta \ln(X)$ and $\ln(Y_2) = \beta \ln(X * (1 + 1\%))$. The change $(Y_2 - Y_1)/Y_1$ is equal to $(1.01^\beta - 1)$ yields the percentage change, $(1.01^\beta - 1) * 100$, which can be approximated to β . Therefore, a one percent change in the independent variable will lead to a β percent change in the dependent variable keeping all other variables constant. In addition to this, the coefficient of a log transformed independent variable effecting a log transformed dependent variable can be interpreted as an elasticity of that independent variable.

The results of fixed effects model show that only the voice and accountability variable is significant. GDP per capita, the rule of law index, the trade openness index and Norwegian export variables do not explain the aid allocation from Norway. Among the policy indexes the rule of law and voice and accountability have positive coefficients; however, trade openness has a negative coefficient. GDP per capita also has a negative coefficient.

In addition to being the only significant variable, the voice and accountability index has the largest coefficient among the policy variables. However, comparing the magnitude of this significant variable with the general findings from the literature is not feasible due to the wide range of different measurements and indexes used to capture the effects of democracy and human rights. The results from the fixed effects model shows that a 0.1-unit improvement in the voice and accountability score causes a 14% increase in aid-for-trade per capita received.

The coefficient of rule of law is nearly half of the coefficient of voice and accountability which shows that a 0.1-unit improvement in rule of law score causes a 7% increase in aid-per-trade per capita received. On the other hand, a 1 unit increase in trade

openness causes a 0.5% decrease in aid-for-trade per capita received. Since trade openness variable has a larger variance than the other two policy variables, analyzing the effect of a one standard deviation change in policies on the dependent variable can be helpful to compare trade openness to the others. A one standard deviation improvement (0.75 units) in the voice and accountability score and a one standard deviation improvement (0.62) in the rule of law score causes a 105% and 42% increase in aid-for-trade per capita received, respectively. On the other hand, a one standard deviation increase (38) in the trade openness measure causes a 19% decrease in aid-for-trade per capita received, which is a considerably smaller percent. Thus, it can be argued that trade openness has a smaller effect than voice and accountability and rule of law.

The coefficient of GDP per capita is -1 which means a one percent decrease in GDP per capita causes one percent increase in aid-for-trade. This would be interpreted as aid-for-trade per capita being unit elastic with respect to GDP per capita. Norwegian export has a very small coefficient along with being insignificant. A 1% increase in Norwegian export value to the recipient country causes a 0.005% increase in aid-for-trade per capita, which suggests that aid-for-trade per capita is inelastic in respect to Norwegian export to the recipient country. This is an expected result considering Norway's altruistic objectives. Additionally, Norway is a big exporter of seafood, which are high-end quality products that face difficulties in transport. Recipient countries being less likely to afford these high-end products further explains this result.

5.2 Tobit Model

The tests available for heteroscedasticity and normality in Stata are based on OLS residuals therefore they are invalid for truncated data. To be able to test the Tobit model these tests should be performed based on generalized residuals. Performing such a test is very complex and is outside the scope of this thesis. Therefore, they were not performed. However, the possibility of the model to fail the heteroscedasticity and normality assumptions should be acknowledged. The Tobit maximum likelihood estimator is consistent if the residuals are homoscedastic and normally distributed. These assumptions are very strong and most likely to be violated. Heteroscedasticity and non-normality of errors have consequences on the betas and the marginal effects on the dependent variable in the case of truncated data unlike OLS (Cameron & Trivedi 2009). The estimations of betas and the marginal effects could be over- or under-estimated and the inference would not be dependable. In addition, the existence of

country-specific fixed effects could cause the coefficients of independent variables to be over- or under-estimated and their significance could be questionable.

The results from Tobit model is presented in Table 12. All the variables have the same signs as the fixed effects model for the latent variable, both in the first stage and second stage. In contrast to the fixed effects model, the Tobit model shows GDP per capita as a significant independent variable alongside voice and accountability. However, since GDP per capita only seems to be significant in the models which do not control for fixed effects, (random effects model, random effects model with dummies and Tobit model) this significance is questionable and might be a result of neglecting the fixed effects.

The beta coefficients here reflect the effect of variables on the latent variable. To be able to interpret the effects of the two-stage estimation separately, one must analyze the marginal effects of independent variables on the probability of being chosen to give aid-for-trade, which is referred to the first stage and the amount of aid-for-trade given when the aid-for-trade given is positive, which is referred to the second stage.

The marginal effects of a change in the independent variable on the probability of receiving aid-for-trade is calculated as the coefficients for the first stage. A 0.1-unit improvement in the voice and accountability score increases the probability of receiving aid-for-trade by 0.7% while a 0.1-unit improvement in the rule of law score increases this probability by 0.3%. However, another policy variable, trade openness has a smaller and negative coefficient. A country having one unit larger trade openness index results in a 0.05% decrease in the probability of receiving aid-for-trade.

A 1% decrease in GDP per capita causes a 0.1% increase in the probability of receiving aid-for-trade. Norwegian export values, on the other hand, have a very small coefficient of 0.005 which indicates that a 1% increase in Norwegian export to the recipient country causes a 0.005% increase in the probability of receiving aid-for-trade.

Table 12. Estimation Results of the Tobit Model

| Independent variables | Beta coefficients | First stage ME prob | Second stage ME positive |
|--|----------------------|----------------------|--------------------------|
| LN (GDP per capita) | -2.0246* (0.4562) | -0.1216* (0.0267) | -1.1199* (0.2552) |
| Rule of Law | 0.5465 (0.6354) | 0.0328 (0.0382) | 0.3023 (0.3517) |
| Voice | 1.0991* (0.4991) | 0.0660* (0.0297) | 0.6080* (0.2762) |
| LN (Norwegian Export) | 0.0903 (0.0755) | 0.0054 (0.0046) | 0.0500 (0.0419) |
| Trade Openness | -0.0077 (0.0061) | -0.0005 (0.0004) | -0.0043 (0.0034) |
| Political Stability and absence of violence/terrorism | -0.6731* (0.3287) | -0.0404* (0.0198) | -0.3723* (0.1825) |
| South African Development Community (SADC) dummy | 2.7653* (1.2577) | 0.1661* (0.0759) | 1.5297* (0.6974) |
| Asia-Pacific Economic Cooperation (APEC) dummy | 2.4266 (1.4993) | 0.1458 (0.0891) | 1.3423 (0.8305) |
| Economic Community of West African States (ECOWAS) dummy | -1.7830 (1.4594) | -0.1071 (0.0878) | -0.9863 (0.8081) |
| South American Common Market (Mercosur) dummy | -2.6851 (2.0196) | -0.1613 (0.1200) | -1.4854 (1.1195) |
| Landlocked country dummy | 2.8166* (0.9751) | 0.1692* (0.0584) | 1.5580* (0.5420) |

Notes: * refers to statistical significance at the 5% level. Standard errors in parentheses. ME prob is the marginal effect on probability of getting aid; ME positive is the marginal effect when the dependent variable is greater than zero.

The second stage is interpreted as the marginal effects of a change in the independent variable on the amount of aid-for-trade received if the recipient has already been selected to

receive aid. Compared with the fixed effects model the change caused by the policy variables are smaller, which could be due to the bias of fixed effects which was the case between the comparison of fixed effects and random effects model. On the other hand, these coefficients might be smaller due to Tobit model taking the truncated data into account. The results of the second stage show that a 0.1-unit improvement in the voice and accountability score causes a 6% increase in aid-for-trade per capita received for the countries receiving positive aid. Improvements in the rule of law score have the half of the effect of voice and accountability as it is in the fixed effects model, which is a 3% increase in aid-for-trade per capita for a 0.1-unit improvement. In contrast to the effect of these policy variables, the trade openness index has a negative and a small effect on aid-for-trade per capita as in the fixed effects model and the first stage of Tobit model. The recipient country's openness increasing by 1 unit causes a 0.4 percent decrease in aid-for-trade per capita.

The natural log transformations of the GDP per capita and Norwegian export value variables have larger coefficients than those estimated by the fixed effects model. Since the random effects model also overestimated the coefficients of the variables in natural logarithm, the coefficients could be larger due to fixed effects. Alternatively, similar to the argument for the policy variables, this difference could be due to the Tobit model taking truncated data into account. This difference is as small as 10% for the coefficient of GDP per capita. The Tobit regression shows that a 1% decrease in GDP per capita cause a 1.1% increase in the aid-for-trade per capita received. However, the coefficient on Norwegian export value under the Tobit model is 1.5 times larger than the coefficient on Norwegian export value under the fixed effects model (which is 0.05). This large difference can also be seen between the coefficients of fixed effects and random effects models, which indicates the fixed effects might be causing this variable to have a bigger coefficient than it actually has.

5.3 Combined Results of the Fixed Effects and Tobit model

The results obtained by fixed effects and Tobit models show that Norwegian aid-for-trade allocation is not largely determined by the determinants suggested in aid allocation literature. Contrary to the findings in the literature on general aid, there is no strong evidence of Norway prioritizing poorer countries over recipient countries with relatively higher income per capita while allocating aid-for-trade. This is an unexpected result which is contradictory to Norway's poverty-oriented objectives. Palestine, which is the top recipient for aid-for-trade per capita, had received more than many countries with lower GDP per capita values in the period of this thesis. This is similar to how it was back in the 1990s for total aid, as Stokke (2005)

argued. However, this can be an indication of Norway putting in an effort to allocate aid-for-trade using another definition of recipients' needs based on crises and conflict. Yet this approach does not seem to be systematic, since the political stability and absence of violence/terrorism variable, which controls for conflict, was not found to be significant. Another alternative definition of recipients' needs could be needs related to trade costs rather than a classical recipients' needs measure such as GDP per capita. Tobit model estimating a negative and significant coefficient for the landlocked country dummy suggests that Norway prioritize landlocked countries, similar to the results for the United States by Tadasse and Fayissa (2009). However, due to the time-consistent nature of this variable, it cannot be used in the fixed effects model and it was not possible to see the effects of any potential bias on the coefficient of this variable due to fixed effects.

Two of the policy variables, the voice and accountability index as well as the rule of law index, had positive coefficients. However, only voice and accountability was significant. This suggests that democracy is a determining factor in Norwegian aid allocation, while institutional quality is not largely important. Similar to findings of Alesina and Dollar (2000), Berthélemy and Tichit (2004), and Dollar and Levin (2006) for Norway, democracy and human rights were found to have a significant positive effect on general aid allocation. Neumayer (2003), on the other hand, found mixed results for Norway. They found personal integrity rights to be insignificant for both stages. The civil and politic rights variable, which is more similar to the voice and accountability variable of this thesis, was significant on stage two yet insignificant in stage one.

Institutional quality is found to be insignificant for Norway through an insignificant coefficient on the rule of law index. This result is similar to rule of law coefficient for Norway in Dollar and Levin (2006). However, it contradicts the results for the composite Scandinavian donor in Weder and Alesina (2002). This insignificance can be linked to Norway's "Samaritan's dilemma" as it is explained by Simensen (2008). The Samaritan's dilemma describes a pattern of giving aid as long as there is need in a country, ignoring the wrong doings on the recipient's part such as corruption. Tanzania as a recipient in the 1980s is given as an example of this. While other donors cut down on big shares of their aid to Tanzania urging the government to undergo a structural reform, Norway maintained its transfers. It was not until the early 1990s that Norway changed its behavior and took action to announce sanctions, after the World Bank documented an important case of corruption in Tanzania. However, due to the feeling of strong moral responsibility on Norway's part, Tanzania was not excluded as a recipient, and has remained an important one to this day.

Trade openness was found to be insignificant and negatively correlated, as was found to be the case for most donors in Weder and Alesina (2002). This contradicts the results of Gates and Hoeffler (2004) for Norway and Tadasse and Fayissa (2009) in the case of the United States in terms of insignificance, and Alesina and Dollar (2000) for Scandinavia in terms of sign and insignificance. However, even though Alesina and Dollar (2000) found the effect of openness to be positive they also noted this effect being very small.

There is no evidence that Norway's aid allocation is effected by their own trade benefits. Results show that Norway did not reward countries with more aid-for-trade per capita if they imported more from Norway. This result is in line with the insignificant coefficients on trade variables for Norway in Dollar and Levin (2006), Neumayer (2003) and Berthélemy and Tichit (2004) as well as for Sweden in Clist (2011), where it was argued to be representative of Scandinavia. The results for Norway are different to the findings of Younas (2008), who argued that trade is a significant motive in aid allocation for donors in general, and Tadasse and Fayissa (2009) who had a similar finding for the US. This outcome overall supports the opinion that Scandinavian countries are more altruistic than the other big donors. This is an expected outcome, since over 70% of Norwegian export goes to developed Europe, and Norway has a negative balance of trade with regions where most of the recipient countries are located, such as southern Asia and Africa (UN 2016).

Japan and Germany are two countries whose aid allocation was studied more recently. Norwegian aid allocation shows similarities to German aid allocation and differs from Japanese aid allocation based on the results of these studies. Germany rewards improvements in democracy and does not give more aid to recipients who receive more German export (Faust 2012), which is parallel with Norway's results, while Japan rewards less democratic recipients and favors the recipients to whom they export more (Cooray & Shahiduzzaman 2004). This comparison yields expected results since Japan is one of the big donors argued to be concerned about their own interests.

The scatter plots of independent variables to aid-for-trade per capita does not show a clear sign of relationship, which is in line with the insignificant results from the models. For example, Figure 3 does not show a clear relationship between aid-for-trade per capita and GDP per capita. However, the highest values of aid-for-trade per capita is clustered between the GDP per capita interval lower than \$5000.

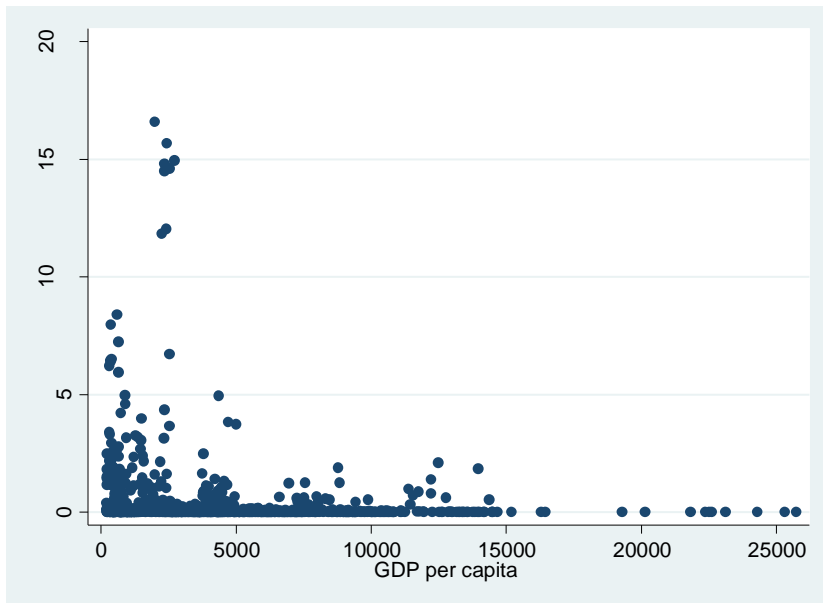


Figure 3. Scatter Plot of Aid-for-Trade Per Capita vs GDP Per Capita

Figure 4 shows the scatter plot of Norwegian export value on aid-for-trade per capita which reflects no clear relationship between these two variables indicating that Norway does not allocate aid-for-trade according to own trade benefits. This is in line with the coefficient of the export variable being insignificant in both the fixed effects and Tobit model.

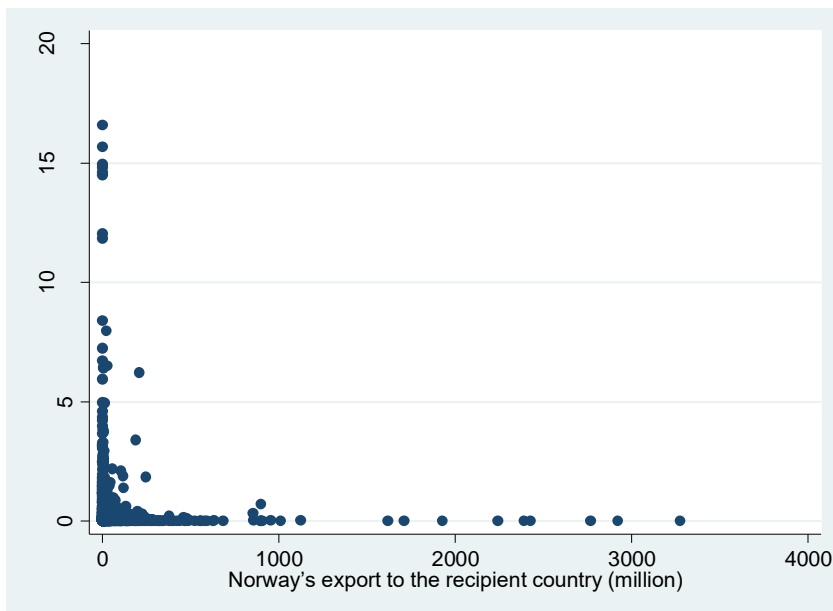


Figure 4. Scatter Plot of Aid-for-Trade Per Capita vs Norwegian Export to the Recipient Country

5.4 Qualitative Analysis

Qualitative analysis is undertaken by studying the set of countries and years with positive aid-for-trade values (excluding the same countries which are excluded due to data issues in the quantitative analysis). First, a data set consisting of the averages of variables in the 10 years between 2005 and 2014 is created for aid-for-trade per capita, rule of law, voice and accountability and the trade openness variables. These variables are normalized by dividing the observations by their means to create a unified cut of point used as a reference assessing the groups according to their qualities. The means of each normalized variables which take the value of one, are determined to be the thresholds. The normalized rule of law and voice and accountability values below one are referred to as good quality, and the values above one referred to as bad quality, as both variables had negative means used while normalizing. The normalized trade openness values below one are referred to as bad quality, and the values above one referred to as good quality. Similarly, the normalized GDP per capita values below one are referred to as low income per capita and the values above one are referred to as high income. Then a scatter plot of observations divided into four groups similar to the qualitative analysis done by Collier and Dollar (2001), is prepared for comparison for each policy variable. Policy variables are analyzed separately instead of working with one composite policy variable as in Collier and Dollar (2001) to separate the effects of each policy variable and create a method comparable to the quantitative section. Each policy variable is paired up with GDP per capita to form four groups: Group 1 are countries with high policy scores and high GDP per capita scores; Group 2 are countries with low policy scores and high GDP per capita scores; Group 3 are countries with high policy scores and low GDP per capita scores; and Group 4 are countries with low policy scores and low GDP per capita scores.

The reason for these groups being divided into both GDP per capita and policy quality is to be able to create a framework that can provide information comparable to the effects of recipients' needs and policy quality on aid allocation. This framework also allows to somewhat control for the needs attributes of the recipients while looking at the changes due to policy improvements. The qualitative analysis is additionally designed to fit the two-stage decision making process of aid allocation. Instead of only reporting the shares of total aid-for-trade, the average for aid-for-trade per capita of these four groups are compared to assess the amount of aid-for-trade allocated as well as the number of countries in each group to assess the choice of recipients to give aid-for-trade.

Table 13 shows the average aid-for-trade per capita of each group and their shares in total aid as well as the number of countries in each group. Recipients with low income received more than four times larger aid-for-trade per capita values compared to the high-income recipients, and they received more than three quarters of the total aid-for-trade. There are 61 low-income countries and only 35 high-income countries receiving aid-for-trade. These results suggest that Norway gives priority to countries with lower income both in the recipient choice and the amount of aid-for-trade allocated, yet the prioritizing seems stronger in the second stage.

Table 13. Results of the Qualitative Analysis

| Group | Rule of Law | | | Voice and Accountability | | | Trade Openness | | |
|-------|-------------|--------------------|-------------|--------------------------|--------------------|-------------|----------------|--------------------|-------------|
| | Mean | Share in total AFT | No. of obs. | Mean | Share in total AFT | No. of Obs. | Mean | Share in total AFT | No. of obs. |
| 1 | 0.25 | 12% | 22 | 0.27 | 14% | 21 | 0.26 | 3% | 18 |
| 2 | 0.09 | 4% | 13 | 0.08 | 2% | 14 | 0.13 | 13% | 17 |
| 3 | 0.98 | 46% | 23 | 0.64 | 46% | 30 | 1.27 | 28% | 22 |
| 4 | 0.47 | 38% | 38 | 0.67 | 38% | 31 | 0.31 | 56% | 39 |

Notes: Mean is the average aid-for-trade per capita of the group. Share in total AFT is the percentage share of each group in the total aid-for-trade disbursements from Norway. Group 1 refers to the countries that have good policy and higher GDP per capita relative to the average. Group 2 refers to the countries that have bad policy and higher GDP per capita relative to the average. Group 3 refers to the countries that have good policy and lower GDP per capita relative to the average. Group 4 refers to the countries that have bad policy and lower GDP per capita relative to the average.

5.4.1 Qualitative Analysis of Rule of Law

The scatter plot of GDP per capita vs rule of law divided into four groups is presented in Figure 5. A higher value on the GDP per capita axis indicates a higher GDP per capita. A lower value on the rule of law axis indicates better institutional quality, as a result of normalizing it with its mean, which was negative, as discussed previously.



Figure 5. Rule of Law

Notes: Group 1 refers to the countries that have good policy and higher GDP per capita relative to the average. Group 2 refers to the countries that have bad policy and higher GDP per capita relative to the average. Group 3 refers to the countries that have good policy and lower GDP per capita relative to the average. Group 4 refers to the countries that have bad policy and lower GDP per capita relative to the average.

The highest number of countries receiving aid-for-trade from Norway is in group 4, countries with bad policies and low-income. This group has 38 countries which is nearly double the 23 countries in group 3, those with good policy and low-income. This is an indication that low-income countries are being rewarded when they have bad policies. Good institutional qualities were rewarded in high-income country group while punished in the low-income country group in the process of choosing countries to give aid. There are 22 high-income countries with good policies and which received aid-for-trade, while there are only 13 high-income countries with bad policies receiving it. Punishing of low-income countries overpowers

the rewarding of high-income countries. In total, more countries received aid-for-trade in the bad policy groups (2 and 4) than in the good policy groups (1 and 3). This implies that better institutional quality is even punished in the selection process by choosing more countries with worse policies to transfer aid-for-trade.

Unlike the selection stage, the low-income country group with good policies is the priority group when it comes to per capita aid allocated in the allocation stage. Countries in group 3 received \$0.98 per capita, on average, which is more than double of \$0.47 which is what group 4 received, on average. However, this high per capita average is due to an outlier, Palestine, being in the group. If Palestine is excluded, the low-income country group with good and bad policies end up having the same aid-for-trade per capita average. Despite Palestine not being an independent state, it had a relatively better institutional quality among the lower-income country group. Thus, Palestine was included in the group with low-income countries with good policy. However, these average values hide the fact that Palestine received an increasing amount of aid-for-trade per capita while having a decreasing trend of rule of law until 2009. Which means Palestine is rewarded a large amount of aid-for-trade and have relatively better rule of law values, on average, throughout the years, yet, the decline in the institutional quality is not punished by giving less and less aid-for-trade each year.

High-income countries with good policies received \$0.25 per capita which is nearly three times more than the \$0.09 average for high-income countries with bad policies. This suggests Norway rewarded institutional quality once the countries are in the high-income group. Chile and Venezuela which are two of the highest income countries, on average, and are a good example to this. Chile, the country with the best rule of law score received \$0.9 per capita while Venezuela which has one of the worst rule of law scores received only \$0.0001. In total, the countries with better institutional qualities (groups 1 and 3) are rewarded with more aid-for-trade per capita, on average, than countries with poor institutional qualities (group 2 and 4) and 58% of total Norwegian aid-for-trade went to the countries with better institutional quality while 42% went to countries those with poorer institutional quality.

Comparing group 3 with group 4 and group 1 separately provides some insight on the effects of the policy improvements compared to effect of decrease in per capita income. The low-income countries with good policies receive \$0.51 more per capita aid-for-trade, on average, than low-income countries with bad policies. The same group receive \$0.73 more aid-for-trade per capita than high income countries with good policies. This suggests that income per capita has more of an effect on the high average of group 3.

5.4.2 Qualitative Analysis of Voice and Accountability

The scatter plot of GDP per capita vs voice and accountability divided into four groups is presented in Figure 6. A higher value on the GDP per capita axis indicates a higher GDP per capita. A lower value on the voice and accountability axis indicates a higher level of democracy and human rights, as a result of normalizing it with its mean, which was negative, as discussed previously.

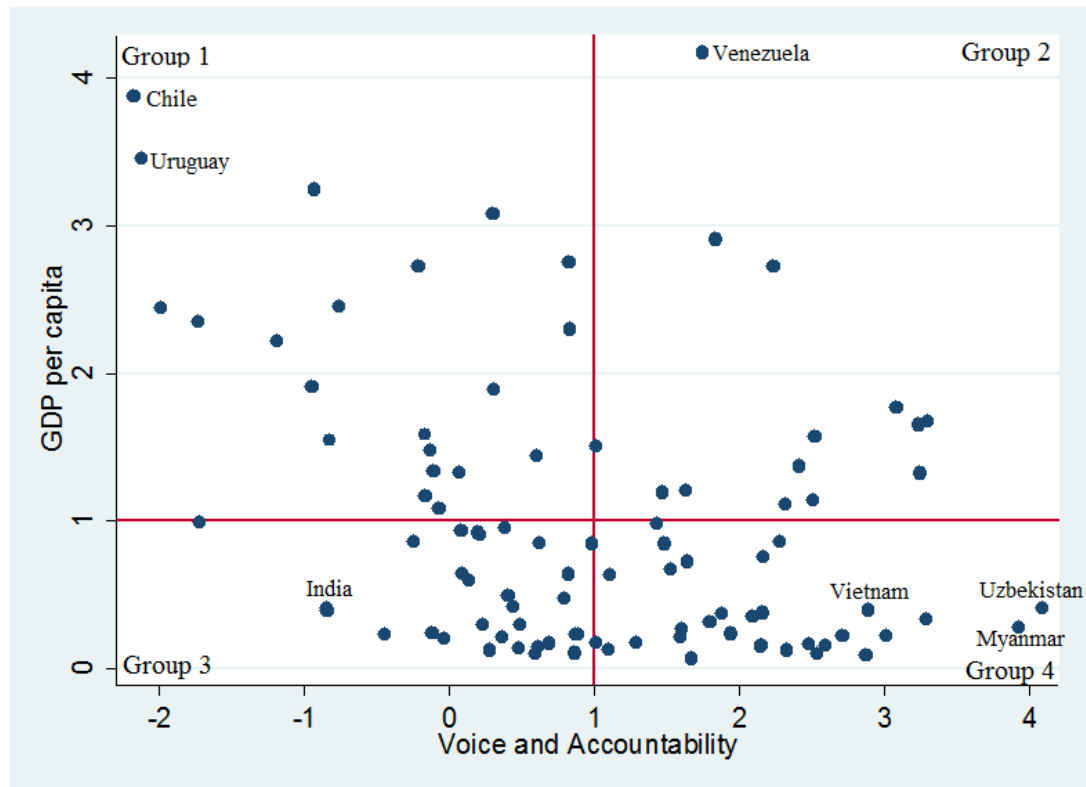


Figure 6. Voice and Accountability

Notes: Group 1 refers to the countries that have good policy and higher GDP per capita relative to the average. Group 2 refers to the countries that have bad policy and higher GDP per capita relative to the average. Group 3 refers to the countries that have good policy and lower GDP per capita relative to the average. Group 4 refers to the countries that have bad policy and lower GDP per capita relative to the average.

Low-income country groups 3 and 4, consist of 30 and 31 countries respectively. These two groups having nearly the same amount of countries suggests that, among low-income countries, having a better voice and accountability score is not rewarded in the first stage. However, when the two high-income groups (1 and 2) are compared, results show that countries with good policies are rewarded. There are 21 countries in group 1 and only 14 countries in group 2 receiving aid-for-trade. In total, more countries received aid-for-trade in the good policy groups (1 and 3) than in the bad policy groups (2 and 4) due to good policies

being rewarded among the high-income countries. This suggests Norway tends to choose more countries with better democracy and human rights efforts to give aid-for-trade.

Similar to the first stage, low-income groups (3 and 4) are the top two groups with similar aid-for-trade per capita averages of \$0.64 and \$0.67 respectively in the second stage. This is an indication that Norway is not rewarding improvements on human rights and democracy among the low-income countries. Improvements are rewarded once the countries have relatively higher income per capita. High-income countries with good policies receive almost four times more aid-for-trade per capita than high-income countries with bad policies. The example of Chile and Venezuela is applicable to voice and accountability as well. Chile which received \$0.9 per capita also has the highest voice and accountability score and Venezuela receiving only \$0.0001 per capita has one of the lowest voice and accountability score. In total, good policy countries (groups 1 and 3) received more aid-for-trade per capita, on average, than bad policy countries (groups 2 and 4) and 60% of total Norwegian aid-for-trade went to countries with better democracy and human rights and 40% went to those with poorer democracy and human rights record. Which means improvements in human rights and democracy were rewarded by Norway in the second stage as well.

The effect of institutional quality on allocation looks stronger in the second stage because of Palestine; however, the effect of democracy and human rights is more consistent since it is the only criteria rewarded in both first and second stage.

5.4.3 Qualitative Analysis of Trade Openness

The scatter plot of GDP per capita vs trade openness divided into four groups is presented in Figure 7. A higher value on the GDP per capita axis indicates a higher GDP per capita. A higher value on the trade openness axis indicates higher trade openness. This in contrast to the other two policy indexes, as the mean value used in normalizing the index was positive.

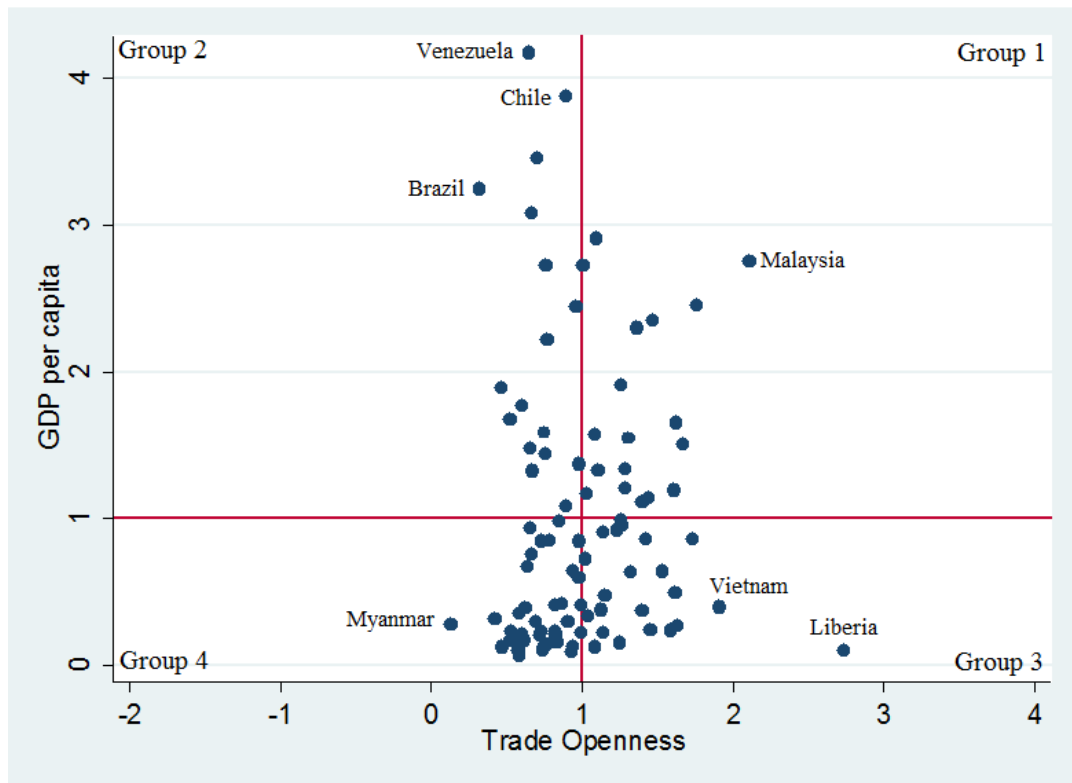


Figure 7. Trade Openness

Notes: Group 1 refers to the countries that have good policy and higher GDP per capita relative to the average. Group 2 refers to the countries that have bad policy and higher GDP per capita relative to the average. Group 3 refers to the countries that have good policy and lower GDP per capita relative to the average. Group 4 refers to the countries that have bad policy and lower GDP per capita relative to the average.

Similar to the analysis on the rule of law, trade openness analysis also shows that low-income countries with bad policies are prioritized in the first stage. There are 39 countries in group 4 that received aid-for-trade from Norway while only 22 countries in group 3 did. The two high-income country groups (1 and 2) have nearly equal number of countries, 18 and 17, respectively. This is different than the findings of the two other policy indicators since high-income countries are rewarded for good policies for other two indicators. In total, less countries

with good policies (groups 1 and 3) received aid-for-trade than countries with bad policies (groups 2 and 4). Norway chose more countries with less trade openness to give aid-for-trade.

In contrast to the quantitative results, the qualitative analysis show that trade openness is rewarded by Norway with more aid-for-trade per capita in the second stage. Comparing the two low-income groups (3 and 4), good policy countries received nearly four times more aid-for-trade per capita, on average, than bad policy countries. This outcome is different than the other two policy analysis since in neither case did Norway allocate on the basis of the policy quality of low-income countries. Trade openness is also rewarded among the high-income countries, even though it is not rewarded as highly as it is among the low-income countries. Group 1 received double the amount of aid-for-trade per capita, on average, of group 2.

In general, 30% of the total Norwegian aid-for-trade went to more open countries and 70% went to the relatively close ones. However, this is an outcome of the open countries having lower populations and receiving a smaller percentage due to this. When per capita aid is considered, all countries with higher trade openness (groups 1 and 3) are rewarded with more aid-for-trade per capita than the countries with lower trade openness (groups 2 and 4) which means Norway rewarded trade openness in the second stage based on average values. The comparison of Liberia and Myanmar is an example to this. Liberia which has a trade openness score of 218 received \$4.2 per capita (second largest average) while Myanmar with a trade openness score of 10 received only \$0.04 per capita and this difference cannot be based on income since Myanmar has actually one third of the GDP per capita compared to Liberia. However, this outcome is based on the averages. Trade openness is found to have a negative effect in the quantitative analysis once the changes in years were also included. The example of Liberia between 2010 and 2014 also shows that a country can receive higher aid-for-trade per capita while constantly experiencing lower trade openness.

Combining the two results from the quantitative and qualitative analysis, it can be argued that Norway targets countries with high trade openness on average to give more aid-for-trade to, yet increases the amount of aid-for-trade given when those countries are less open, compared to other periods. Aid-for-trade is given with the intention of stimulating the recipient country's growth by incentivizing them to trade more. Keeping the purpose of aid-for-trade in mind, it can be argued that donors should prioritize the countries which commit to integrating into the global market. Norway prioritizing countries with higher trade openness on average indicates that these countries were targeted because of their potential to trade more, as shown by the higher trade openness values compared to the other countries. However, a recipient

receiving more aid-for-trade in the years when they are less open suggests that those countries received more aid-for-trade as support to increase their trade volume back.

Similar to the analysis of rule of law, a comparison for the effect of trade openness versus income can be applied here since the priority group is also low-income countries with good policies. Group 3 received \$0.96 more per capita, on average, than group 4 while receiving \$1 more per capita, on average, than group 1. This comparison shows that income effects the high average more than policy does. This is similar to the rule of law analysis; however, the effect of trade openness seems to be larger than the effect of rule of law.

Chapter 6. Conclusion

It has been widely accepted in the literature that aid should be allocated to poorer countries with good policies. The needs and merits of recipient countries and the donor interests are suggested as the possible criteria that donor countries follow while allocating general aid. Even though Norway's general aid allocation has been included in papers analyzing aid allocation from several donor countries, to my knowledge there is no study that focuses only on Norway or Norwegian aid-for-trade utilizing econometric methods. This thesis set out to analyze the effects of the level of neediness and the merits of the recipient countries, as well as the self-interest of the donor country on the allocation of Norwegian aid-for-trade. A panel data set of 113 recipient countries between 2005-2014 was created and analyzed using a random effects, a fixed effects and a Tobit model. The data set was also analyzed qualitatively in order to retrieve more information.

6.1 Main Findings

The motivations suggested in the literature that explain the allocation of general aid do not largely explain Norwegian aid-for-trade allocation. Similar to the findings of Hoeffler and Outram (2011), unobserved country-specific effects were found to have a significant effect on aid allocation, suggesting that the decision-making process for Norwegian aid-for-trade is not sufficiently understood. A greater number of relatively poorer recipients are chosen to receive aid-for-trade, and they received more aid-for-trade per capita from Norway based on analyzing average values. However, through the quantitative method, there is no compelling evidence suggesting Norway systematically allocated aid-for-trade considering the per capita income level of recipients. The result suggesting that Norway prioritized landlocked countries could indicate that Norway allocated aid-for-trade using another definition of recipients' needs related to being landlocked, which increases a country's trade costs. However, the dummy variable of landlocked countries was not suitable to use in the fixed effects model due to its time-consistent nature. Therefore, the result related to this variable could not be compared among different models as a robustness check of sign and significance.

There is evidence through both the quantitative estimation and the qualitative analysis that improvements in democracy and human rights are rewarded by Norway with an increase in the probability of being chosen as a recipient country and being allocated more aid-for-trade per capita. Democracy and human rights were found to be significant, with a positive coefficient through both the fixed effects and Tobit models. Qualitative analysis showed that

Norway rewarded the recipient countries with a higher level of democracy and human rights if they were among those with a relatively higher per capita income level. This result indicates that democracy and human rights levels are of little importance in decision-making when the recipients being considered are those with relatively lower per capita income levels. However, there is no consistent evidence that Norway allocates aid-for-trade by taking the level of institutional quality and trade openness into account. Institutional quality and trade openness were only found to be important for the second stage of aid allocation through qualitative methods, and found to be insignificant in both the fixed effects and Tobit models. Norway rewarding better quality of democracy and human rights mostly among relatively higher per capita income recipients, and not systematically taking institutional quality and trade openness into account, points to a Samaritan's dilemma, when a donor gives aid as long as there is need in a country, ignoring the wrong doings on the recipient which was argued to be a pattern for Norway by Simensen (2008).

There is also no evidence that Norway pursues its economic interests while allocating aid. The result supports the idea that Norway is not driven by trade interests in aid-for-trade allocation. This expected result supports the altruistic reputation of Norway in contrast to the findings which suggest that donor interests are one of the main motivation in giving aid for big donors such as the United States and Japan.

6.2 Limitations of the Study

This study has many limitations due to the availability of data, the complexity of two-step aid allocation process and the fact that there is not a uniformly accepted objective measure of the policy variables. The data of recipient countries include only developing countries since those are the ones receiving aid. Developing countries are also the ones which are exposed to political instability and conflict. This situation generally causes those countries to produce limited data. Data from some countries which might hold important information about the analysis unfortunately were not available due to these reasons. In addition, the policy variables used are not perfect proxies for the concepts of interest in this thesis, since the measurement of complex social concepts such as the needs and merits of recipient countries is challenging.

Another limitation is that the aid-for-trade allocation of Norway seems to be affected by country-specific individual effects rather than the set of variables that are often used in the general aid allocation literature. This might be related to two reasons. One possible explanation is that aid-for-trade allocation could be effected from different factors than general aid allocation. To account for some of these factors I have included the dummy variables of

regional trading agreements and landlocked countries as control variables found to be significant by Tadasse and Fayissa (2009) which to my knowledge is the only study dealing with aid-for-trade allocation models. These variables captured some of the unobserved effects even though the country-specific effects kept overpowering the allocation decisions. Another explanation for this could be based on the targeted areas of development in the aid-for-trade action plan of Norway. Climate, environment and sustainable development; women and gender equality; and petroleum and clean energy are areas claimed to be prioritized by Norway and are important goals that could orient allocation decisions on providing aid-for-trade. One can argue that the characteristics of countries related to these areas can affect the allocation of Norwegian aid-for-trade. Unfortunately, there were no available indexes that could be used for this purpose given the extent of the data set used.

Since these results show that the motivations suggested by the literature related to general aid allocation do not explain the aid-for-trade allocation of Norway sufficiently, further research should be done to gain greater insight over how the decision-making process for the allocation of aid-for-trade works differently to allocation of general aid. Either new and stronger measures should be found for the motivations analyzed in this thesis, or other motivations which possibly can explain aid-for-trade allocation specifically.

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