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교육학석사학위논문

An Analysis of Aid Allocation
for Post-Secondary Education

: Focusing on France and Germany

고등교육 양자 원조 배분에 관한

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ABSTRACT

An Analysis of Aid Allocation for Post-secondary Education -Focus on France and Germany

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Since the official establishment of the Millennium Development Goals (MDGs) in 2000, the donors have kept trying to achieve universal primary education. While the international community has pooled its resources to promote basic education for all, its emphasis on basic education in development policy led to overlook the importance of higher education for capacity development. Even though the international agenda emphasizes primary education, some major donors give high priorities to aid allocation for post-secondary education. The purpose of this research is to analyze the patterns of allocation of foreign aid to post-secondary education in two large donors, France and Germany where its distinct preference is for higher education. This study is also to empirically analyze major objectives of higher education aid allocation in the two countries for the period 2001 to 2011 by using a regression model.

Key words: Post-secondary education, ODA, Aid Allocation, France, Germany

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CHAPTER 1. INTRODUCTION

Over the last two decades, much of the global debate on Official Development Assistance (ODA) in education has focused on advocacy for increasing the volume of such aid, especially to attain the Education for All (EFA) and Millennium Development Goals (MDGs). Since The Jomtien World Conference on Education for All (EFA) in 1990, the OECD countries elaborated the International Development Targets (IDTs) in 1996 and the Millennium Summit in 2000 reached the agreement on the MDGs. The Dakar World Forum on Education a decade after the Jomtien Conference reinforced the international education priorities on basic education again. While the international community has pooled its resources to promote basic education for all, its emphasis on basic education in development policy led to overlook the importance of higher education for capacity development. However, OECD donor countries and international development agencies started to make tertiary education into an arena for poverty reduction and a source of innovation and economic growth. It is based on the rationale that viable higher education¹ would contribute to the process of capacity development and thus reducing poverty in a given society or country by building up the necessary skilled manpower in all fields relevant to its development in a long term (OECD and

¹ "The term, higher education, refers to the tertiary education sector and mainly to courses of study that prepare students for scientific and research-oriented careers, as well as careers that call for a high level of professional qualifications. Some study courses are oriented toward specific and more practical, technical skill sets." (Austria Development Agency, 2009, p. 4). From a pragmatic point of view, the World Conference on Higher Education held in 1998 defines higher education as "all types of education (academic, professional, technical, artistic, pedagogical, long distance learning, etc..) provided by universities, technological institutes, teacher training colleges, etc... , which are normally intended for students having completed a secondary education, and whose educational objective is the acquisition of a title, a grade, certificate, or diploma of higher education." (The World Conference on Higher Education, 1998)

IBRD/The World Bank, 2007; Norad, 2005; Hotland and Boren, 2005, 2012; Austrian Development Agency, 2009). It would also cultivate the critical mass of thinking people by providing knowledge about key development issues in their own countries²; therefore, it would promote socio-economic and cultural development, democracy and good governance, and achievement of the MDGs in the long run. Such rationales are stated as follows.

Capacity development³ is the process whereby people, organizations, and society as a whole, create, adapt and maintain capacity over time, that is, the ability to manage their affairs successfully. Among other things, capacity development depends on the acquisition of high skills and on the monitoring of one's progress (OECD and IBRD/The World Bank, 2007, p. 11).

Based on the connection between capacity development and higher education, donor-assisting activities have variations. According to Hyden (2010), donors supports can be broadly divided into four groups: (1) scholarships, (2) partnerships/networks, (3) information technology, and (4) governance and management reforms. Hotland and Boen (2005) categorize support modalities used in higher education cooperation for

² The World Conference on Higher Education held in 1998 sustains its four principal goals for higher education institutions: 1) the development of new knowledge; 2) the training of highly qualified personnel; 3) the provision of services to society; and 4) the ethical function which implies social criticism.

³ The United Nations Development Programme (UNDP) defines capacity and capacity development as follows: "Capacity is the ability of individuals, organizations and societies to perform functions, solve problems, and set and achieve goals. Capacity development entails the sustainable creation, utilization and retention of that capacity, in order to reduce poverty, enhance self-reliance, and improve people's lives. [...] Capacity development builds on and harnesses rather than replaces indigenous capacity. It is about promoting learning, boosting empowerment, building social capital, creating enabling environments, integrating cultures, and orientating personal and societal behavior." The definition of UNDP is slightly different from that of OECD, however, they share common rationales that capacity building is based on learning and skills acquisition among individuals and organization. It is also committed to sustainable development from a long term perspective. Retrieved from <http://www.undp.org/capacity>

decades: (1) budget support, (2) institutional cooperation programs, (3) fellowship programs, (4) technical assistance, and (5) agreements. The form of development aid has been mainly scholarships/fellowships, institutional cooperation/ research networks, and budget support. In reality, the first two forms have been main funding programs and assistance for quite a number of years⁴.

For better and more efficient assistances through foreign aid, donors and international development agencies have set the criteria which govern aid allocation policies prior to the aid delivery to enhance aid effectiveness. They also have been investigating how much their assistances contribute to meeting development goals and targets. While development assistances in higher education have increased, it is also necessary to analyze its effectiveness. However, little is written on determining priorities for the aid allocation decision by education sub-sector. Furthermore, literatures on the effectiveness and impact analysis of higher education aid are extremely limited and few works are done at only an institutional level. It is because sectoral approach-assessment studies avoid an extremely high complexity of macro-level evaluations. Since there is hardly any hard evidence of the impact or verifiable indicators for measuring success, it is difficult to trace and measure the outcomes of each beneficiary and the contribution of beneficiaries to economic development in their home country.

To demonstrate effectiveness, education ODA programs must be able to measure the achievement of their objectives that have been set for foreign aid allocated

⁴ Scholarship/fellowship programs target qualified candidates from developing countries to obtain a diploma or degree abroad. Institutional cooperation and network building is a program at institutional level which fund collaborative projects between organization in developing countries and higher education/ research organization in the North. Those types of support may strengthen the specific capacities of individuals or institutes; however, capacity building at a system level is hardly done (Boeren, 2012).

to higher education. Before reviewing whether or not countries' education assistances are effective, it must first define their objectives at a level at which their achievement can be measured (Gosling, 2009). Therefore, this paper aims to first discern the important factors that donors decide who gets which amount of foreign aid for higher education by their aid allocation behaviors.

This research, in specific, focuses on France and Germany where they similarly have a high share of foreign aid for higher education. What distinguishes their approaches to cross-border post-secondary education policy related to their aid allocation? To answer the questions, the following chapter reviews existing literatures. The third chapter presents key data and trends in their evolving picture of ODA for post-secondary education. The next chapter analyzes the determinants of higher education aid allocation. It presents the theoretical framework and the results of the regression methodology. This part also examines the different policy rationales behind the focus on post-secondary education and developments. The final chapter concludes remarks and includes suggestions for a future study.

CHAPTER 2. LITERATURE REVIEW

With a focus on the importance of Official Development Assistance (ODA), a number of studies have been investigating the patterns of aid allocation and their determinants for more than 40 years. Along with the aid allocation literature, aid effectiveness literature is another major stream in the literature on foreign aid.

2.1 DETERMINANTS OF AID ALLOCATION

Since McKinlay and Little (1977), the vast empirical literatures have examined the determinants of general aid allocation and classified altruistic and selfish donors. The discussion of earlier studies has employed multiple regressions on cross-sectional data (McKinlay and Little, 1977, 1978, 1979; Maizels and Nissanke, 1984; and Gounder, 1994, 1995). Scholars on aid policies agree that a country's major determinants of ODA policies can be largely categorized into three motives: i) strategic national interests; ii) economic potentiality; and iii) humanitarian or developmental considerations (Maizels and Nissanke, 1984; Hook et al., 1998).⁵ Recent empirical work confirms that foreign policy goals of the donor continue to be the most important motive for giving aid (Alesina and Dollar, 2000; Burnside and Dollar, 2000; Neumayer, 2003; Gates and Hoeffler, 2004; Sawada et al., 2008). The authors concluded donors give more aids to

⁵ Besides the three typologies, colonial history, cultural similarity, and regional proximity also affect the formation of certain ODA policy patterns. Some scholars suggest different categories. Ruttan (1989) argues that self-interest can be used to pursue economic or political interests. He also adds a second category called "ethical considerations" representing the moral responsibility to assist. Todaro and Smith (2003) makes a similar division of political and economic motive, but do not consider ethical consideration a motive. Instead, Lumsdaile (1993) emphasizes a "moral vision" as the most important motivation behind aid allocation (cited in Krueger, 1995).

poorer countries and those with a good policy environment.⁶

Ali and Isse (2006) estimate a model covering 151 countries over the period 1975 to 1998. They found that trade, private credit, foreign direct investment, GDP per capita, and government consumption are the important determinants of foreign aid. Similar evidence was also found even in OECD countries' aid allocation behavior. Younas (2008) concluded that OECD countries allocate more aid to recipients who import goods in which donors have a comparative advantage in production. These studies have shown that aid can be used to build alliances, to promote exports or to promote long-run economic growth.

In several papers exploring the determinants of Nordic aid allocation, scholars recognized that the Nordic ODA pattern had been affected less by economic or strategic concerns and more by humanitarian and ideological incentives (Stokke, 1989; Lumsdaine, 1993; Hook, Shraeder, and Taylor, 1998; and Alesina and Dollar, 2000).⁷ Gates and Hoeffler (2004) emphasized that the distinct uniqueness of the Nordic countries' ODA pattern from other OECD aid donors could be found in their commitment to human rights, democracy, poverty in recipient countries, and little share of tied ODA.⁸ However, the existing literature usually uses aggregated data of Norway, Denmark, Sweden and Finland in the analysis.

⁶ Dollar and Levin (2004) estimate a regression equation by using a poverty selectivity index and a policy selectivity index. They have made a strong point that the allocation of aid has recently become much more efficient as donors increasingly adhere to the principle of selectivity.

⁷ Alesina and Dollar (2000) found that most Nordic donors give more aid to poorer countries, and those with more open economic policies and democratic institutions. Alesina and Weber (2002) found that the Scandinavian countries give less to corrupt recipients. In general, the Nordic countries target the poorest and appear to reward good economic policies and political institutions.

⁸ Gates and Hoeffler (2004) provided an explanation for such significantly different donor behavior that Nordic donors see foreign aid an extension of the principles of the welfare state beyond the domestic borders.

In addition, numerous papers analyzed the determinants of general aid allocation by specific donors and recipients over time (McGillvray and Oczkowski, 1992; Meernik et al., 1998; Gounder and Sen, 1999; Macdonald and Hoddinott, 2004; Berthelemy and Tichit, 2004; Cooray and Shahiduzzaman, 2004; Demirel-Pegg and Moskowitz, 2009; Doucouliagos and Manning, 2009; Claessens et al., 2009; Koo et al. 2011; Shon et al. 2011). Despite abundant literatures, much little work has assessed the determinants of the aid allocation to one particular sector: education.

Among the limited literature, Lewin (1994), using data of top twenty recipients of education aid by UK from 1989 and 1991, closely analyzes British education aid effort. Key education development indicators were measured. In the author's findings, how British bilateral education aid is allocated is related with relatively higher score in Human Development Index, smaller gender disparities in primary enrollment and higher proportion of GNP spent on education.

The research on the education aid patterns and policies of Denmark, Sweden and Holland was conducted by Buchert. In "Current Foreign Aid Patterns and Policies on Education in Developing Countries among Like-minded Nations", the scholar (1995) found that Dutch foreign aid had been allocated to low income countries particularly for basic education, while Swedish education aid focused on primary education and vocational training. The findings are considerably consistent with the determinants of general aid flows investigated by several scholars as mentioned above.

The findings of Dollar and Levin (2006) reveal that multilateral education aid is better targeted to needy countries than bilateral education aid. Their estimates suggest that selfish aid motives differentiate between bilateral and multilateral donors. The result

is parallel to the major results of Farooq (2012). The author tentatively investigates the education aid determinants through recipients' needs (RN)/ donors' interest (DI)/ recipients' merit model. With robust results, he concluded that both bilateral and multilateral donors at collective level respond to recipient need in their education aid allocated. They allocate more education aid to the poor in most need. However, almost all examined donors even so called altruistic Nordic countries are not need-oriented. Observations with respect to merit show that only some donors respond to a good policy environment in recipients.

As stated earlier, several international agenda-setting conferences, the introduction of the MDGs and the 'Education for All' initiatives have heavily focused on primary education. This trend has been reflected in the literatures concerning education aid. Despite the importance of education at higher level, aid for post-secondary education has received little attention.

In addition to the champion of discourses about basic education, even researches are rarely done on the determinants of education aid by sub-sector by quantitative methodology. They are rather done by qualitative methods in policy or history context. The literatures examining the changes in education aid allocation over time is mainly in the educational planning and policy context. King (2010), a scholar specialized in education policy and ODA, examines Chinese education aid to Kenya in policy context. He found that China did not plan to harmonize its procedures with other donors in Kenya and it upheld a distinct discourse based on notions of "win-win," friendship and non-interference among the donors. Nordtveit (2011) also explores China's bilateral educational cooperation with Cameroon by investigating in particular, Chinese language

education, school construction, capacity building and higher education research cooperation. The paper discusses China's emergence as an aid donor in Africa, using its educational cooperation. Since reliable data is invalid, quantifiable factors are not determined in conclusion. Instead, both scholars conducting the researches proved the education aid relationship in policy or historical context.

2.2 AID EFFECTIVENESS

Aid effectiveness addresses whether aid promotes growth and helps alleviate poverty. Most of the aid effectiveness literature has focused on broad questions of general aid and its relationship with economic growth by using aggregate macro-level data. However, as the argument of Findley et al. (2010), sectoral evaluations are necessary to obtain more accurate evaluations of aid effectiveness.

Michaelowa (2004) analyzes the impact of education aid on primary enrolment rates. The author uses a panel analysis for about 120 low and lower-middle income recipient countries with various control variables.⁹ The dependent variables are net primary enrolment rates and primary completion rates. According to her findings, the effect of total aid given to education sector is positive but at insignificant level. The national education expenditures do not turn to be a positive relationship with both educational outcomes. Good governance in economic terms does not show a statistically positive sign, while political and institutional governance has its significant impact. The final conclusion from these results is that on average in most of estimated countries, the effect of aid on educational outcomes is very low. She also confirms her findings again in

⁹ The control variables are related to the recipient country's educational and political environment such as national education expenditures, national education system and governance.

2007 with Weber.

Dreher, Nunnenkamp and Thiele (2006) conclude with contrast results to the findings of Michaelowa and Weber (2007) in terms of political environment in recipient countries. The authors empirically investigate the impact of foreign aid given to education sector for about 100 recipient countries over the period 1970-2005. They also test whether aid positively affects educational outcomes in good policy environment or not. The results show that both the expenditure on education and education aid have a statistically positive relationship with enrolment rate while democracy does not have a significant relationship with school enrolment. Other findings in their extended model suggest that the donors should move more resources to improve the system of basic education in the recipient countries, thus enhancing both the quality and quantity of education in these countries.

In common, the above literatures use primary school enrolment rate and completion rate as dependent variables (more in Wolf, 2006; Kwabena and Asiedu, 2008). Using the same educational outcomes, many findings show that education aid has a positive role in improving educational outcomes at a significant level or a positive/negative/ mixed impact under some political and institutional governance. Despite the previous researches in the aid debate, still little attention is given to further assessing how aid should be allocated by education sub-sector, purpose, and country to maximize the impact of any given level of aid.

CHAPTER 3. AID ALLOCATION FOR POST-SECONDARY EDUCATION

3.1 AN OVERALL PICTURE

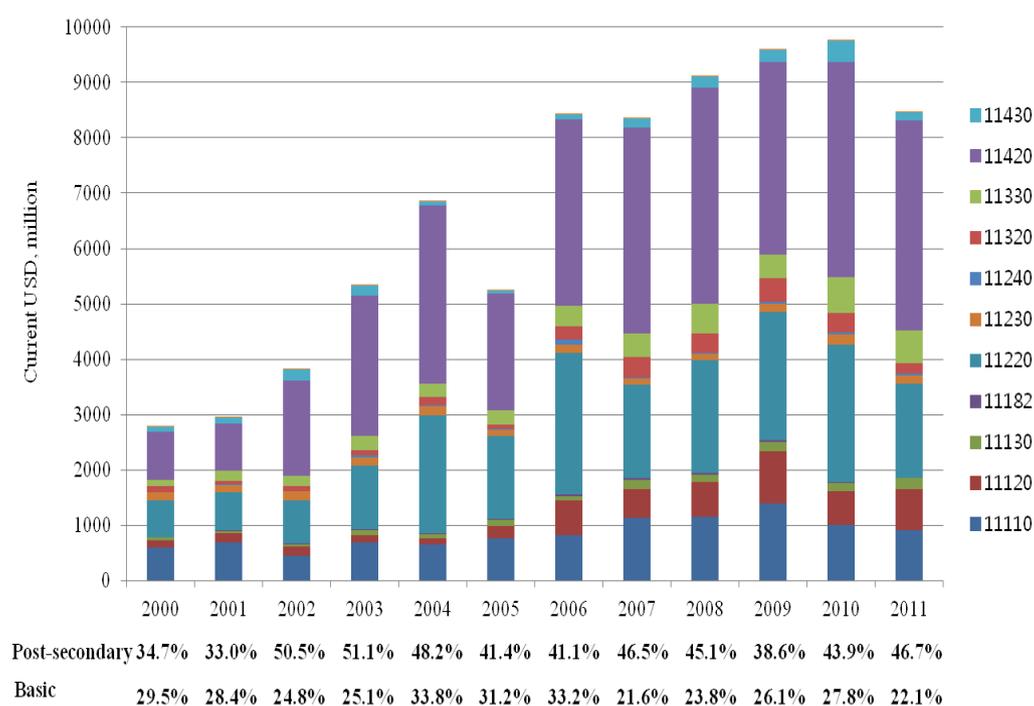
This section aims to understand the overall architecture of education aid before examining the determinants of education aid allocation in France and Germany with a distinct preference for higher education. The following information is the overall picture of education aid allocated by OECD/DAC countries for the period of 2000-2011. All data was withdrawn from OECD dataset, the Creditor Reporting System (CRS). Figure 1 illustrates the annual change of education ODA allocation in OECD/DAC countries by level. By its sub-sector, the share of post-secondary education ODA (11420, 11430) has been the highest, starting 34.7% in 2000 to 46.7% in 2011.¹⁰ The second largest education aid has been committed to basic education ODA(11220, 11230).¹¹ Chart 1 presents that the average share of aid given to education in total ODA during the period. 8.1% of total ODA has been committed to education aid. When averaged, the share of post-secondary education aid occupies 43.9% of total education ODA, followed by that

¹⁰ See Appendix 1 for further description of CRS code

¹¹ Among DAC countries, eight countries have granted aid with a concentration on basic education. They are Canada, Denmark, Ireland, Netherland, Norway, Sweden, United Kingdom, and United States. UK and the US are major donors in terms of aid volume. Even though the size of aid volume is small, the Norway and Sweden have distinct preferences for basic education in terms of its proportion. Another eight countries out of DAC countries have allocated aid with distinct preferences for post-secondary education. Those are Austria, Belgium, France, Germany, Greece, Japan, New Zealand, and Portugal. France and Germany are the top donors in higher education arena. Greece is an emerging donor for post-secondary despite its small aid volume. (Source: CRS data, by the author)

of basic education (26.9%). The lowest amount of ODA has been committed to secondary education. Chart 2 shows the classification of types of education aid allocated by OECD/DAC countries between 2006 and 2011 when data is available. Type of imputed student costs (E02) shares the most, followed by project type (C01).¹² Chart 3 describes DAC countries' regional share of education ODA for all levels between 2000 and 2011. Its highest share is done by Africa, followed by Asia.

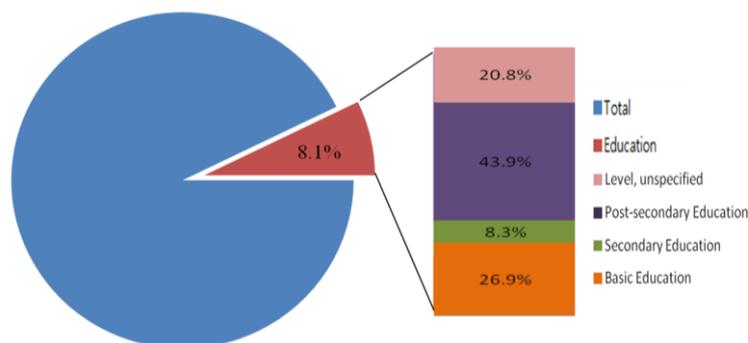
Figure 1. Education ODA Allocation by sub-Sector, OECD/DAC by Year (2000-2011)



Source: OECD CRS Data (2013), organized by the author

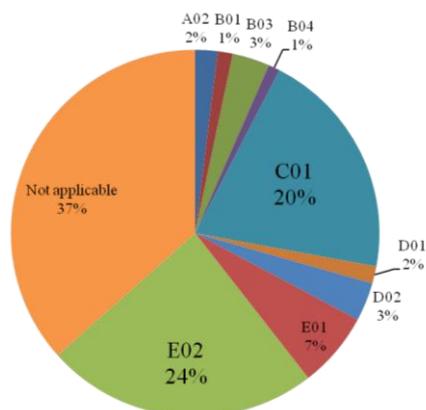
¹² See Appendix 2 for further description of aid types

Chart 1. ODA Share of Education by sub-Sector, OECD/DAC (2000-2011)



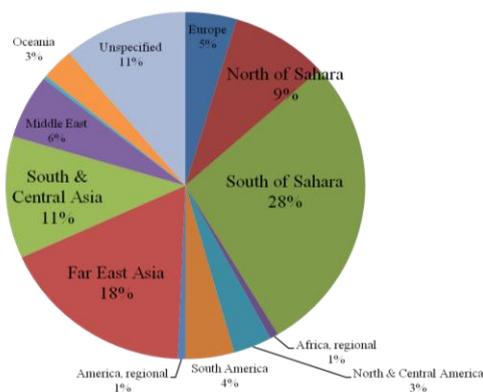
Source: OECD CRS Data (2013), organized by the author

Chart 2. Education ODA by its Type, OECD/DAC (2006-2011)



Source: OECD CRS Data (2013), organized by the author

Chart 3. Regional Share of Education, OECD/DAC (2000-2011)

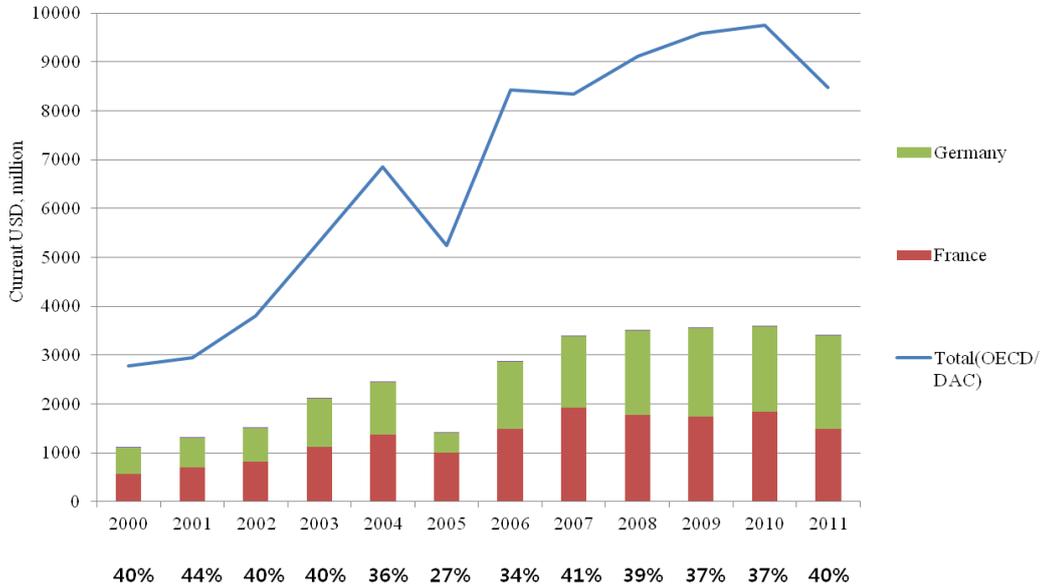


Source: OECD CRS Data (2013), organized by the author

3.2 POST-SECONDARY EDUCATION ODA IN FRANCE AND GERMANY

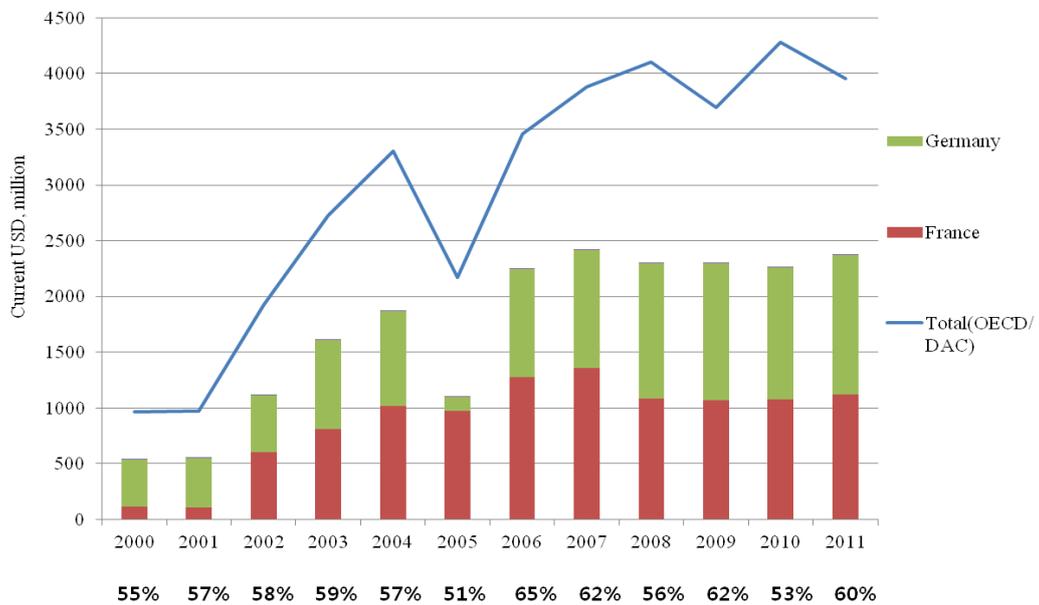
France and Germany are the champions in education ODA commitments for the period, shown in Figure 2. In 2001, they together constituted of 44% out of the total education ODA given to all levels by OECD/DAC countries while the proportion dropped to 27% in 2005. Development Cooperation: a French Vision provides France's cooperation action strategies which operate sectorally and thematically. The core sector is education and training (Ministry of Foreign and European Affairs, 2011). Germany also set its eleven priority focal areas. One of the priority sectors is education (OECD, 2010). Pursuing development cooperation in education as a top priority may seem to contribute to the MDG 2. However, in terms of their sub-sector priority, they heavily focus on post-secondary education. In 2006, France and Germany together accounted for 65% of the total bilateral aid to post-secondary education committed by OECD/DAC countries. It reaches the highest in the year. Shown in Figure 2, the two countries contribute to higher education ODA by more than 50% of total higher education aid each year.

Figure 2. Total Education ODA Share, France and Germany by Year (2000-2011)



Source: OECD CRS Data (2013), organized by the author

Figure 3. Share of Post-secondary Education ODA, France and Germany by Year (2000-2011)

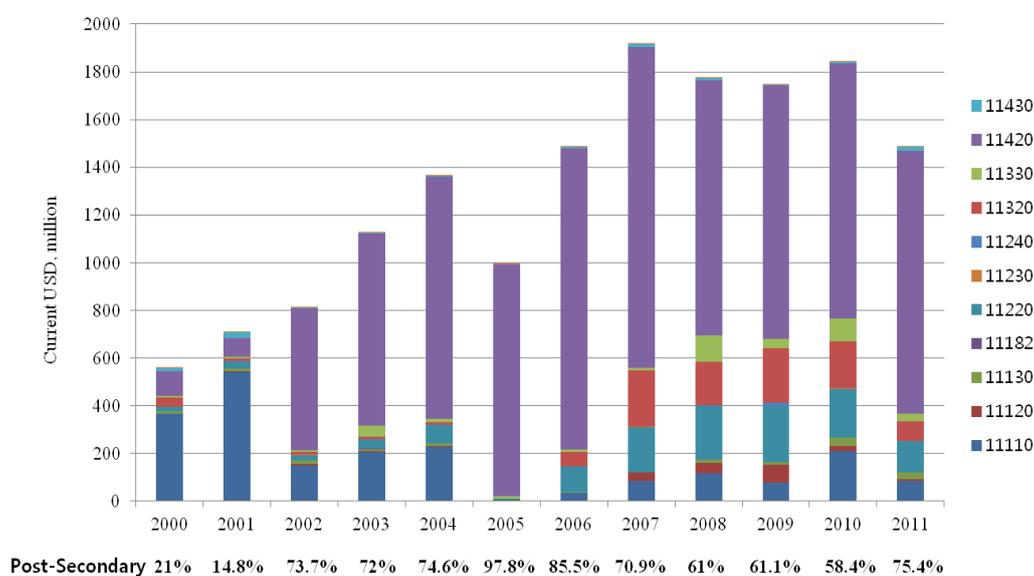


Source: OECD CRS Data (2013), organized by the author

3.2.1 FRANCE

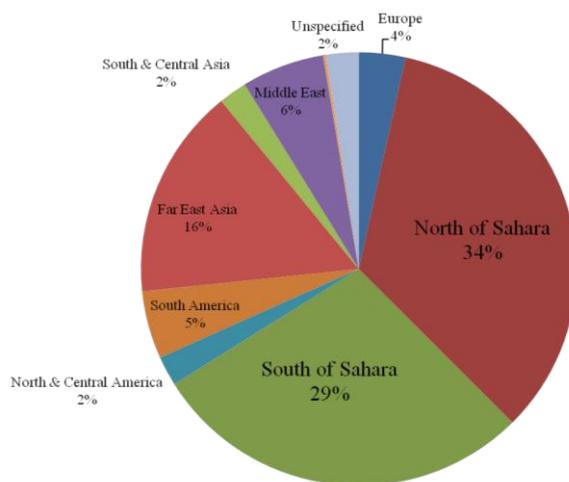
In 2000, France granted a small amount of aid to post-secondary education by \$ 105 million (at current price), but the country has increased its volume up to \$ 1,121 million in 2011. Figure 4 illustrates how much France focuses on higher education in development assistance of education. Since 2002, the share of aid for post-secondary education (11420, 11430) has become dominant. Even in 2005, almost all education aid was granted to higher education. In 2007, France was the single largest bilateral donor to post-secondary education with a contribution of \$ 1,359 million.

Figure 4. Education ODA Allocation by sub-Sector, France by Year (2000-2011)



Source: OECD CRS Data (2013), organized by the author

Chart 4. Regional Share of ODA for Post-secondary Education, France (2000-2011)



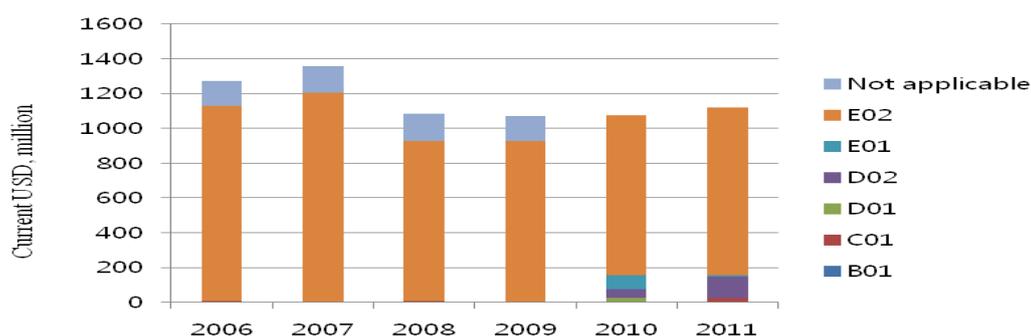
Source: OECD CRS Data (2013), organized by the author

Chart 4 illustrates the France's regional share of ODA for post-secondary education between 2000 and 2011. France has allocated more than 50% of such aid to Africa, followed by Asia, and Americas. Ministry of Foreign and European Affairs (2011) reaffirms that France has a priority in Africa and Mediterranean regions, the poorest.

As seen in Figure 5 concerning its type of aid allocation for post-secondary education between 2006 and 2011, imputed student costs (E02) is a dominant aid-delivery modality. It composes up to around 87% out of total higher education aid in France. French development strategy document (2011) informs that France will pursue its policy of hosting foreign students in the country: each year 260,000 foreign students receive virtually free higher education. Since France charges both international and

domestic students with a small amount of tuition fee,¹³ the study grant as imputed student costs is the major aid modality.

Figure5. Types of Aid for Post-secondary Education, France by Year (2006-2011)



Source: OECD CRS Data (2013), organized by the author

In the country, the number of foreign students in higher education constitute 12% of the student body, of which 3/4 are enrolled at universities. The foreign students' proportion is higher at the post-graduate level (Kingombe, 2011). Table 1 show that the number of Chinese students has increased most in France between the year of 2000 and 2011. They accounted for 1.54% in 2000 but 9.67% in 2011. The most represented nationalities of students remain Morocco and China (each with 28,463 and 25,923 respectively in 2011), followed by Algeria (21,052) and Tunisia (11,576).¹⁴ The large majority of students come from Morocco which constituted 15.35% in 2000 and still remained the top in 2011 even with its decrease.

¹³ See Appendix 3

¹⁴ Retrieved from OECD/DAC CRS dataset

Table 1. Foreign Students Enrolled in France, by Year (2000-2011)

France	Increasing No. of foreign students Enrolled	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
		Total: All countries	2523359	137085	147402	165437	221567	237587	236518	247510	246612	243436	249143
China	23812	1.54%	1.44%	3.31%	4.81%	4.85%	6.05%	6.92%	7.64%	8.57%	9.47%	9.51%	9.67%
Tunisia	11514	0.05%	0.05%	4.74%	4.25%	4.10%	4.12%	4.20%	4.27%	4.44%	4.49%	4.49%	4.32%
Senegal	9025	0.09%	0.09%	3.70%	3.60%	3.51%	3.71%	3.80%	3.77%	3.82%	3.59%	3.57%	3.41%
Algeria	7513	9.88%	8.53%	8.50%	8.32%	9.36%	9.40%	8.74%	8.16%	7.71%	7.69%	7.72%	7.85%
Morocco	7415	15.35%	16.47%	17.83%	15.72%	13.81%	12.62%	11.84%	11.23%	11.09%	10.86%	10.57%	10.61%
Viet Nam	4968	0.89%	0.85%	0.94%	1.08%	1.24%	1.58%	1.88%	2.09%	2.11%	2.33%	2.24%	2.31%
Guinea	3461	0.35%	0.39%	0.49%	0.52%	0.53%	0.63%	0.85%	1.04%	1.13%	1.21%	1.40%	1.47%
Cameroon	3172	2.39%	2.25%	2.15%	2.08%	2.09%	2.13%	2.18%	2.26%	2.32%	2.34%	2.41%	2.41%
Russian Federation	2740	1.06%	1.12%	1.16%	1.15%	1.09%	1.13%	1.25%	1.31%	1.37%	1.44%	1.47%	1.56%
Brazil	2550	1.01%	0.98%	0.88%	0.78%	0.74%	0.78%	0.85%	1.05%	1.21%	1.36%	1.36%	1.47%

Note: Bold number presents the recipient country which is not included in the top ten countries having many students enrolled in France each year

Source: OECD CRS Data (2013), organized by the author

The following table is about the top recipient countries receiving post-secondary education ODA. The most frequent top recipients are Morocco, Algeria, Tunisia, Lebanon, Cameroon and Madagascar which are former French colonies. On the other hand, China and Vietnam were included among top ten recipients. France sources relatively few students from Asian nations with even their increasing number of students enrolled. Language and historical ties at least partially explains why France receives such high numbers of students from Africa, and comparatively low ones from Asia. Top recipients in Africa such as Morocco and Tunisia are strong sources of international students for France, as presented in the previous table. This also explains why France is popular amongst students from Vietnam, a former French colony which is one of Asia's only French-speaking nations.

Table 2. Top Ten Recipient Countries, France by Year (2001-2011)

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
1	South Africa	Morocco	Morocco	Morocco	Morocco	Morocco	Morocco	China	China	China	Algeria
2	Algeria	Morocco	Morocco	Algeria	Morocco						
3	Tunisia	Tunisia	China	China	China	China	China	Algeria	Algeria	Morocco	Tunisia
4	Morocco	Senegal	Tunisia	Tunisia	Tunisia	Tunisia	Tunisia	Tunisia	Tunisia	Tunisia	Senegal
5	Cote d'Ivoire	China	Senegal	Senegal	Senegal	Senegal	Senegal	Senegal	Senegal	Senegal	Cameroon
6	Turkey	Cameroon	Cameroon	Cameroon	Cameroon	Vietnam	Cameroon	-	-	-	Guinea
7	Mauritius	Cote d'Ivoire	Lebanon	Lebanon	Lebanon	Cameroon	Vietnam	Vietnam	Vietnam	Vietnam	Gabon
8	Serbia	Lebanon	Cote d'Ivoire	Cote d'Ivoire	Vietnam	Lebanon	Lebanon	Lebanon	Lebanon	Cameroon	Madagascar
9	Gabon	Madagascar	Madagascar	Madagascar	Cote d'Ivoire	Madagascar	Madagascar	Cameroon	Cameroon	Guinea	Cote d'Ivoire
10	Senegal	Gabon	Vietnam	Vietnam	Madagascar	Cote d'Ivoire	Cote d'Ivoire	Madagascar	Guinea	Lebanon	Mali

Source: OECD CRS Data (2013), organized by the author

France has been criticized that such French education ODA allocations dominate the political and cultural objectives (Boeren, 2012). Nuffic (2008) reviewed that French scholarships aim to create a Francophone and Francophile network for the partnerships of tomorrow by forging diverse ties during students' stay in France. There are deep debates about whether imputed student costs and scholarships should be counted as aid since such aid never leaves the country by being spent mostly for postgraduate students' living cost and tuition fees in France. Their effective use is also being questioned. Peer Review of France (2004) also recommends that the data concerning imputed student costs of students should be adjusted when they do not go back to their countries of origin. Despite many criticisms, France still gives a priority to

support for higher education and reports imputed student costs as technical cooperation (OECD, 2009). In the context of technical cooperation, the country also uses aid to encourage university reforms, specifically helping universities in Francophone Africa restructure their qualifications to meet international standards (Lewis, 2009). The rationale for the technical cooperation is revealed in official document. According to the strategy document in 2011, France aims to encourage the production and exchange of knowledge and culture. It also considers research and higher education the innovation key to promoting sustainable development.

French cooperation will support development research in France and encourage the setting up of international partnerships with both emerging countries and countries with still nascent scientific communities, where it will support scientific development...(Ministry of Foreign and European Affairs, 2011, p. 36)

3.2.2 GERMANY

According to the Federal Ministry for Economic Cooperation and Development (BMZ), promoting education is a priority area in German development policy and its policy focus is stated as follows:

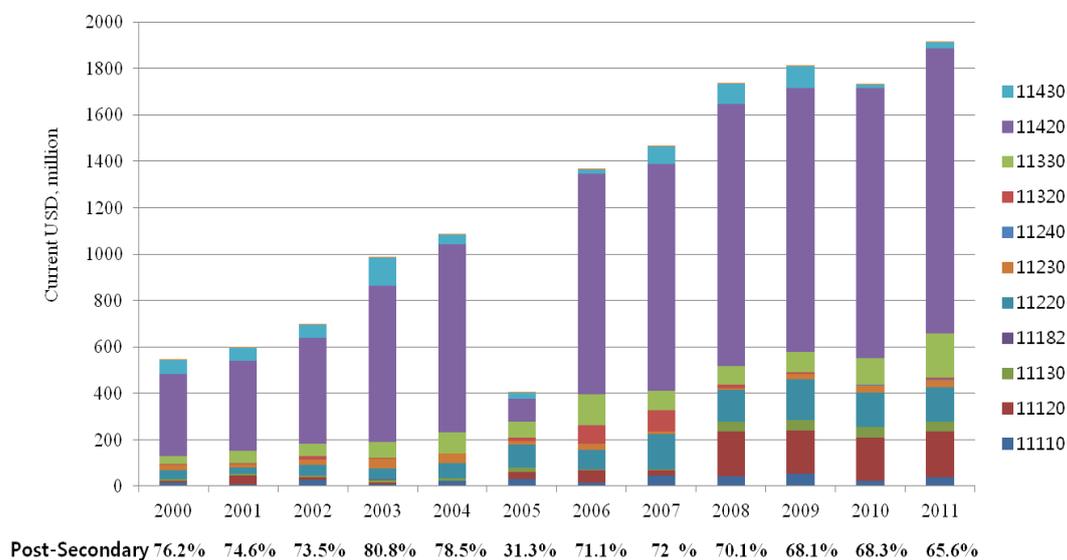
The promotion of education is an important step in the fight against the structural causes of poverty and social exclusion...The German government has explicitly committed itself to achieving the MDGs and the objectives adopted at the 2000 World Education Forum in Dakar (BMZ, 2008).

Such German strategy of development cooperation in education sector involves a further priority area of action, “boosting the economy and enhancing the active participation of

the poor. Based on the development policy, Germany has emphasized primary, secondary, vocational and higher education, along with gender equality in the human right context. Therefore, the country has invested the second largest budget of bilateral education aid.

Despite German commitment to achieving the MDGs, in terms of total volume, Germany is the second largest bilateral donor to post-secondary education. In 2000, the country committed \$415 million (at current price) and has gradually increased its aid volume except for the year of 2005. In 2011, the amount of higher education aid peaked up to \$ 1,254 million. As presented in Figure 6, the share of higher education ODA was the highest in 2003 by 80.8%, while the lowest in 2005 by 31.3%.

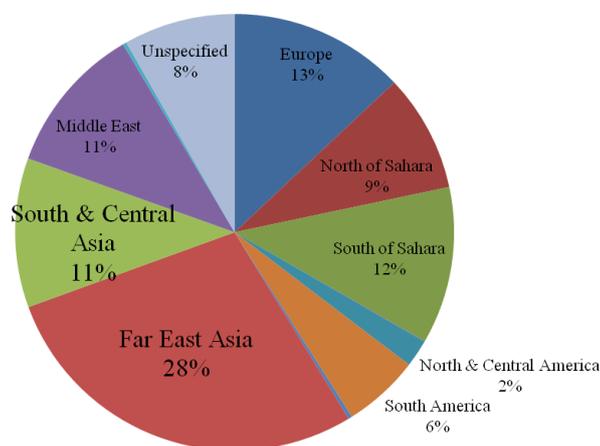
Figure 6. Education ODA Allocation by sub-Sector, Germany by Year (2000-2011)



Source: OECD CRS Data (2013), organized by the author

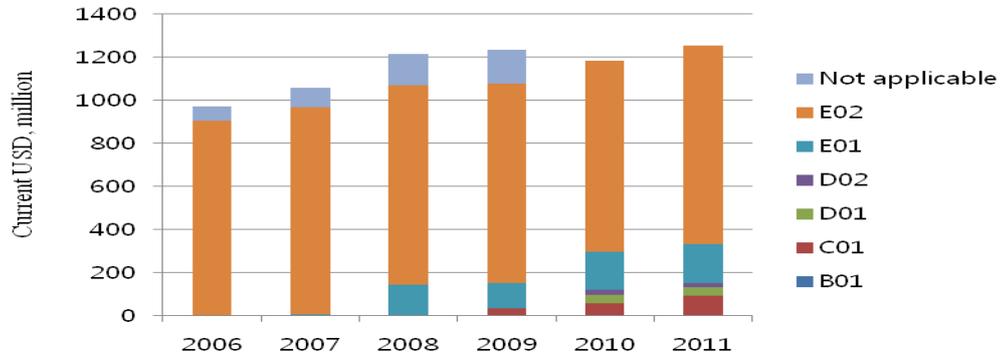
Chart 5 describes the Germany's regional share of ODA for post-secondary education between 2001 and 2011. A difference from the French pattern is that Asia is the most favorable recipient region, followed by Africa. Figure 7 illustrates what types of aid modalities are used for post-secondary education in Germany. A similarity with France is the aid-delivery modality. In Germany, imputed student costs (E02) are also the most dominant type of aid for post-secondary education. It composed up to around 93% out of total higher education aid in Germany in 2006. According to the German Federal Ministry of External Cooperation (BMZ) statistics for 2007, nearly 94% of the German aid support for higher education covers study places for foreign students from developing countries in Germany (Bergmann, 2009).

Chart 5. Regional Share of ODA for Post-secondary Education, Germany (2000-2011)



Source: OECD CRS Data (2013), organized by the author

Figure 7. Types of Aid for Post-secondary Education, Germany by Year (2006-2011)



Source: OECD CRS Data (2013), organized by the author

Germany's Academic Exchange Service (DAAD) is known as the biggest higher education funder globally. The largest beneficiaries receiving scholarships are from China and India. Table 3 presents that the number of Chinese students enrolling German universities has most increased during the period. Chinese students were counted as of 3.49% out of the total in 2000; however, their number has been increased dramatically and constituted 10.07% in 2011. Between 2004 and 2007, the number of students having prior education outside the host country has exploded. In 2004, non-citizen Chinese students in Germany were 27,129, while enrolled students with prior higher education were 24,272.¹⁵ On the other hand, Turkey has the largest proportion of students studying in Germany at the beginning year but such students' share has decreased during the period.

¹⁵ The annual data of the period between 2004 and 2007 includes students with prior education outside host country. The data for 2008, 2009, 2010, and 2011 includes students without residency (OECD database).

Table 3. Foreign Students Enrolled in Germany, by Year

Germany	Increasing No. of foreign students enrolled	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Total: All countries	262446	187033	199132	219039	240619	458879	464400	469357	465388	423321	436854	445192	449479
China	38738	3.49%	4.57%	6.42%	8.37%	10.48%	11.07%	10.95%	11.09%	12.03%	10.86%	10.32%	10.07%
Russian Federation	16483	3.48%	3.75%	4.07%	4.23%	4.87%	5.12%	5.07%	5.29%	5.88%	4.95%	5.06%	5.11%
Bulgaria	13363	1.79%	2.54%	3.36%	4.14%	5.13%	5.41%	5.35%	5.36%	5.60%	4.64%	4.13%	3.72%
Ukraine	12233	1.62%	1.98%	2.38%	2.67%	2.93%	3.21%	3.18%	3.43%	3.80%	3.40%	3.37%	3.39%
Poland	11687	4.74%	5.09%	5.41%	5.66%	6.10%	6.24%	6.17%	6.32%	6.60%	5.45%	4.98%	4.57%
Turkey	9399	14.20%	13.35%	12.39%	11.33%	7.45%	6.91%	6.83%	6.95%	7.50%	6.93%	7.55%	8.00%
Austria	7859	3.52%	3.31%	3.15%	2.86%	2.60%	2.32%	2.30%	2.39%	2.73%	2.50%	2.90%	3.21%
Cameroon	7043	1.94%	2.08%	2.04%	2.03%	2.21%	2.23%	2.21%	2.29%	2.51%	2.39%	2.38%	2.37%
India	6655	0.69%	0.71%	1.00%	1.43%	1.73%	1.77%	1.75%	1.65%	1.73%	1.55%	1.52%	1.77%
France	5587	3.45%	3.26%	3.02%	2.70%	2.84%	2.76%	2.73%	2.66%	2.89%	2.42%	2.63%	2.68%

Note: Bold number presents the recipient country which is not included in the top ten countries having many students enrolled in France each year.

Source: OECD CRS Data (2013), organized by the author

Table 4. Top Ten Recipient Countries, Germany by Year (2001-2011)

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
1	China	China	China	China	-	China	China	China	China	China	China
2	Cameroon	-	Cameroon	Cameroon	Indonesia	Turkey	-	-	-	-	India
3	Iran	Cameroon	Morocco	-	Ukraine	Cameroon	Turkey	Turkey	Turkey	Turkey	Turkey
4	Morocco	Morocco	Turkey	Turkey	Mexico	Morocco	Cameroon	Cameroon	Cameroon	Cameroon	Cameroon
5	Turkey	Turkey	-	Morocco	China	-	Morocco	India	Ukraine	India	Ukraine
6	Indonesia	Iran	India	India	Congo, Dem. Rep.	Ukraine	Ukraine	Ukraine	India	Ukraine	Iran
7	Jordan	Indonesia	Iran	Iran	Burkina Faso	India	India	Morocco	Morocco	Syria	Syria
8	Syria	India	Indonesia	Indonesia	Brazil	Iran	Iran	Syria	Syria	Iran	Morocco
9	India	Egypt	Syria	Syria	Chile	Syria	Syria	Iran	Iran	Morocco	Indonesia
10	Egypt	Jordan	Georgia	Georgia	South Africa	Indonesia	Indonesia	Indonesia	Indonesia	Indonesia	Vietnam

Source: OECD CRS Data (2013), organized by the author

Table 4 is about the top recipient countries receiving higher education ODA. It clearly shows that China is the first priority recipient of higher education ODA, except the year of 2005. Turkey, Cameroon, Syria and Iran are among the most frequent top ten recipient beneficiaries. Bashir (2007) examined the correlation between foreign students and ODA for post-secondary education in selected recipients. The regression results are positive at significant level. The result seems to be reflected in the statistical result shown in Table 3 and Table 4.

CHAPTER 4. THEORETICAL FRAMEWORK AND EMPIRICAL ANALYSIS

4.1 HYPOTHESES

This paper questions the determinants of higher education aid allocated by France and Germany: what distinguishes their approaches to post-secondary education policy related to their aid allocation? For the research question, hypotheses are set as follows:

- H1: Developmental and educational motives for the two donors may not significantly affect the decisions concerning aid allocation for higher education
- H2: Close economic relationships between the donor and the recipient may significantly affect the amount of higher education aid commitments.
- H3: Both donor countries may allocate the significant amounts of higher education aid to the recipient having more inflow of migration population to the donor country.
- H4: Decisions to allocate higher education aid may not be significantly affected by the democratic political environment of the recipients.
- H5: France may have a high tendency to give aid for post-secondary education to the former colonial recipient country, while Germany may not.
- H6: Both donors may grant more aid for post-secondary education to those with cultural/academic opportunities affiliated with the institution of Donor (Campus France or Goethe Institut) .

4.2 METHODOLOGY

The estimated equation is to examine the bilateral ODA allocation decision for post-secondary education by France and Germany respectively in a given year. I run the regression with all data of recipient countries by year from 2001 to 2011 which is the recent year for available data collection. The equation reported in this section is specified as follows:

$$\text{ODA} = a + b_1 \text{GNI} + b_2 \text{EDU} + b_3 \text{LANG} + b_4 \text{TRADE} + b_5 \text{MIG} + b_6 \text{PRCL} + b_7 \text{COLONY} + b_8 \text{CUL}$$

To examine the equation, data were collected from various sources, mainly database named OECD (CRS). The dependent variable is the commitment of aid amount for post-secondary education from France and Germany respectively to each recipient country year by year. As addressed in the earlier literature on the aid allocation determinants, aid commitments are preferred to disbursements in this paper because they much better reflect the decisions made by the donors having total control of the commitments. It is because disbursements are dependent on the recipients' willingness and influenced by the administrative capacity of the recipients to meet the donors' conditionality (Berthelemy and Tichit, 2002; Dollar, 2000; McGillivray and White, 1993). Such aid flows are converted into US dollars at current prices and were extracted from OECD/DAC statistics.

To explain policy decisions to allocate education aid in France and Germany, their aid commitments for higher education are yearly regressed against a set of important driving motives, which can be classified into four categories. Boeren (2008)

defined four main objectives: humanistic/developmental, academic, economic and political.¹⁶

Table 5. Four objectives of giving scholarships

Objectives	Definition
Humanistic/ Developmental	Scholarships increase the access to higher education for people from countries where these opportunities do not exist or where people cannot afford to pay for these studies. People who have completed their studies will be in a better position to improve their living conditions and, if they return home, to the social and economic development of their home country
Academic	Providing scholarships for foreign students and organizing international study programs has a positive influence on the quality of the teaching programs at home and opens the door to international academic collaborations and partnerships
Economic	International education and training opportunities attract foreign students which may have substantial economic returns for the training institutes and local economies. They may also serve as bridges to economic collaborative activities in future.
Political	Study abroad enhances mutual understanding between people of different cultural and political backgrounds and may enhance international relationships between people and nations.

Source: Template by the author based on Boeren et al. (2008). P. 9.

Based on his categories, I re-named them as developmental, educational, socio-economic, and political/cultural. I garnered a range of socio-economic characteristics of recipient countries, as well as their historical importance. In specific, independent variables are the followings:

- Economic status: GNI per capita (Purchasing Power Parity)

¹⁶ The author classified the objectives of assistances for higher education, in specific, scholarships.

- Educational Environment: Number of students in tertiary education per 100,000 inhabitants
- Linguistic proximity: French-speaking/ German-speaking country
- Commercial relationship: Ratio of bilateral trade volume
- Migration: Inflow of foreign population by nationality
- Governance: Mean of political right and civil liberty index
- Colonial past: Colonial history of a recipient country by a donor
- Cultural link: Number of Campus France/ Goethe Institut in a recipient

For developmental objective, I used annual GNI per capita to measure the socio-economic well-being of the country and people in a recipient country. In reality, recipients with lower household levels of wealth and low GNP per capita have difficulties in participating in higher education abroad due to their low affordability. The variable is assumed to reflect the policy concern about offering higher education and combating poverty in a long term. The data was taken from World Development Index by World Bank.

In educational objective, educational environment in a recipient country was measured by the number of students in tertiary education per 100,000 inhabitants. This data was collected from UNESCO. This variable is expected to capture educational environment of recipient country, in specific the pools of eligible student candidates who already completed at least secondary-level education, thus being able to pursue

higher education abroad by scholarships. The next indicator is linguistic proximity. The data was based on the list of French-speaking country and that of German-speaking country. Since France and Germany are classified among countries offering comparatively few English programs, a French and German-speaking criterion is eligible condition (OECD, 2013).

The variable in socio-economic objective is the total bilateral trade flow (import+export) between the recipient country and the donor, expressed as its percentage of donor's total bilateral trade volume. This bilateral ratio describes the strength of commercial links between a donor and a recipient. The data for bilateral trade volume come from ComTrade. Migration data captures inflow of foreign population by nationality and was collected from OECD statistics. Lahiri and Raimondos-Müller (1999) found that ethnic groups in the donor country are an important determinant of foreign aid allocation since each ethnic group in the donor country lobbies the government for allocating more aid to its country of origin. The inflow of foreign population by nationality measures the size of foreign population holding a residence/work permit valid for the minimum registration period. The variable does exclude foreign students; therefore, there is no counterpart effect that education aid commitment increases foreign immigration population due to the inflow of students after receiving educational grants.

Concerning political/cultural objective, I adopted the civil liberty and political right evaluation provided by Freedom House. The variable takes values from 1 (highest quality of democracy) to 7 (lowest quality of democracy). I averaged each value of the two variables by year. Another indicator is colonial legacy. Colonial past is a dummy

variable equal to 1 when the recipient is a former colony of France and Germany respectively and 0 otherwise. The data was taken from Central Intelligence Agency's the world factbook. Alesina and Dollar(1998, 2000) found that there is a variation in the influence of colonial past by donor, however, the longer the colonial history, the stronger the ties are. Leisinger (2000) argues that the rationale behind large sums of development assistance from former colonial powers is to relieve guiltiness and provide some compensation. Hyden (2010) suggests that former colonial powers support for higher education with their cultural/educational principle. The colonial link seems to be waning (Riddel, 2008), however, such a strong link still exists.

The last indicator is mutual understanding through cultural relationships, measured by the number of Campus France or Goethe Institut in a recipient country. Those two institutes play a pivotal role in promoting cultural and educational exchange at tertiary education level. Campus France¹⁷ is the French national agency to improve services for international students and junior scholars and to manage wider programs of international mobility. It also tries to export its know-how in cultural areas and contribute to the country's international allure in postsecondary programs. The Goethe-Institut¹⁸ is German cultural institution operating worldwide where it encourages international cultural exchange and fosters knowledge about the country concerning its culture and society. It also states that its educational and training products contribute to international mobility in learning community. The number of regional branches of Campus France and Goethe Institut all over the world was counted from each official site.

¹⁷ <http://www.campusfrance.org/en/page>

¹⁸ <http://www.goethe.de/uun/enindex.htm>

4.3 EMPIRICAL ANALYSIS

Table 6 and 7 provide estimation results for the determining factors of bilateral aid allocation for higher education by France. Table 6 is the result retrieved from the regression including China case while Table 7 results from the regression excluding China. Each column describes annual determinants of higher education aid commitments. In the majority of the analysis, judging by the high values of the adjusted R^2 , the regression equations exhibit explanatory power. The number of observations in each column represents the cases of recipient countries having all available data to be analyzed.

In 2001, only migration revealed as positive at a significant level. Despite its trivial effect, France tends to allocate more aid for post-secondary education to the recipients with high flow of migrant population to France. It is quite surprising that colonial link is insignificant; however, the variable remains as one of important factors explaining French higher education aid allocation. In the following year, migration and colonial link show all positive at the 1% level. This trend is shown to be annually consistent at significant level in general. It is interesting that colonial link becomes more important determinant, even though France has received critical criticisms on aid giving behavior focusing on its former colonial countries. The donor still continues supporting institutions and individual students in their former colonies by spending its aid on scholarships and imputed student costs, mostly for graduate study in France but some spent for study in developing countries. More significantly, commercial relationships between France and recipient countries are a dominant factor determining who gets which amount of aid for post-secondary education. Increases in the ratio of bilateral

trade volume are strongly associated with the large share of higher education aid allocated by France.

Commercial and colonial link and migration variables exhibit a consistent trend of positive signs at significant level while other variables do not play a statistically significant role. As assumed, developmental objective has no constant coefficient, either positive or negative. Educational objectives are test insignificantly with a positive sign in almost all regressions. Its result of 2009 shows a tendency that more aid is allocated to the recipients with fine educational environment having a larger eligible student pool to hold graduate-level degree. However, the effect is highly trivial. Initially, language proximity was expected to affect French higher education aid allocation since France provides some courses delivered by English. Unlike its assumption, the result shows interesting outcomes with a positive sign at insignificant level. Moreover, Campus variable in cultural motive has an unexpected outcome. The initial assumption was that the more people in a recipient country have chances to be informed and feel cultural proximity by the French cultural institution, the more France may open educational opportunities to them through French aid for higher education such as scholarships and research fellowships. It is because Campus France has aims to host highly talented international students and scholars. Despite this rationale, the effect of Campus France turns out to be insignificant in all annual regressions.

In sum, the most important determinants are socio-economic motives. Both two variables within this motive category, commercial link and migration, have generally the expected positive sign. Another important factor is political/cultural motives. Within this motive, only colonial legacy plays a big role in allocating aid for higher education.

Table 6. Regression Results of France (1)

France Inc. China	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Year	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
GNI	0.000 (1.012)	0.000 (0.384)	0.000 (0.731)	0.000 (0.288)	-0.000 (0.016)	-0.000 (-0.252)	-0.000 (-0.120)	-0.000 (-0.392)	-0.000 (-0.023)	-0.000 (-0.051)	-0.000 (-0.114)
STU	0.000 (0.170)	0.000 (0.612)	0.000 (1.118)	0.000 (0.901)	0.001 (1.180)	0.001 (1.438)	0.001 (1.363)	0.001 (1.738)	0.001* (2.079)	0.001 (1.561)	0.001 (1.510)
LANG	0.542 (1.026)	2.625 (1.641)	3.234 (1.438)	3.333 (1.053)	4.175 (1.229)	5.336 (1.400)	3.399 (0.877)	5.077 (1.670)	3.215 (0.871)	4.981 (1.173)	2.394 (0.570)
TRADE	-0.015 (-0.004)	20.407*** (5.074)	31.051*** (6.780)	36.536*** (6.499)	42.639*** (7.911)	55.907*** (9.528)	56.642*** (9.851)	63.413*** (13.689)	53.470*** (12.276)	47.074*** (12.113)	44.928*** (11.836)
MIG	0.357** (3.724)	2.147*** (11.725)	2.593*** (12.354)	3.941*** (13.185)	3.788*** (10.654)	3.812*** (9.032)	4.950*** (9.832)	-0.329 (-0.476)	3.408*** (6.686)	4.144*** (7.873)	4.434*** (9.049)
PRCL	0.032 (0.318)	-0.020 (-0.082)	0.073 (0.181)	-0.086 (-0.156)	-0.432 (-0.723)	-0.169 (-0.236)	-0.198 (-0.249)	-0.393 (-0.621)	-0.134 (-0.182)	-0.028 (-0.040)	-0.346 (-0.462)
COLONY	0.274 (0.508)	5.703*** (3.590)	7.450** (3.378)	10.123** (3.207)	10.801** (3.234)	13.831*** (3.747)	15.473*** (3.900)	14.710*** (4.703)	10.809** (3.085)	6.874 (1.676)	9.471* (2.381)
CAMPUS	-0.117 (-0.409)	-0.067 (-0.172)	-0.090 (-0.168)	0.062 (0.084)	-0.571 (-0.706)	-0.756 (-0.779)	-0.931 (-0.878)	-0.921 (-1.090)	-0.811 (-0.858)	-0.820 (-0.890)	-1.522 (-1.641)
R2	0.743	0.878	0.888	0.889	0.871	0.875	0.878	0.835	0.880	0.891	0.907
NO. of observations	33	81	81	81	75	74	74	75	68	65	60

Table 7. Regression Results of France (2)

France Exc. China	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Year	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
GNI	0.000 (1.012)	0.000 (0.897)	0.000 (1.444)	0.000 (1.729)	0.000 (1.254)	0.000 (1.380)	0.000 (1.280)	0.000 (0.364)	0.000 (1.191)	0.000 (1.502)	0.000* (2.139)
STU	0.000 (0.170)	0.000 (0.435)	0.000 (0.917)	0.000 (0.767)	0.000 (0.936)	0.000 (0.910)	0.000 (0.882)	0.001 (1.740)	0.001* (2.183)	0.000 (0.798)	0.000 (0.091)
LANG	0.542 (1.026)	2.521 (1.589)	2.871 (1.323)	2.766 (0.983)	2.475 (0.834)	2.812 (0.877)	0.258 (0.076)	3.636 (1.283)	0.524 (0.169)	0.759 (0.227)	-4.410 (-1.261)
TRADE	-0.015 (-0.004)	8.340 (0.947)	5.598 (0.522)	-17.485 (-1.346)	-22.572 (-1.557)	-23.506 (-1.533)	-25.994 (-1.510)	19.664 (1.500)	-13.397 (-1.014)	-21.962 (-1.916)	-20.476 (-1.744)
MIG	0.357** (3.724)	2.423*** (9.493)	3.098*** (11.059)	5.027*** (14.019)	5.238*** (12.068)	5.283*** (11.940)	6.455*** (12.306)	0.606 (0.878)	5.049*** (9.605)	5.643*** (11.954)	5.923*** (12.803)
PRCL	0.032 (0.318)	-0.022 (-0.089)	0.132 (0.337)	0.031 (0.063)	-0.268 (-0.515)	0.045 (0.075)	0.098 (0.143)	-0.397 (-0.679)	-0.117 (-0.193)	-0.027 (-0.049)	-0.421 (-0.718)
COLONY	0.274 (0.508)	5.633*** (3.578)	7.244** (3.409)	9.384** (3.342)	9.141** (3.130)	12.026*** (3.892)	13.537*** (3.969)	14.328*** (4.959)	10.001** (3.434)	5.482 (1.727)	10.363** (3.322)
CAMPUS	-0.117 (-0.409)	0.072 (0.182)	0.231 (0.437)	0.840 (1.231)	0.917 (1.192)	1.357 (1.516)	1.579 (1.526)	0.579 (0.652)	1.155 (1.328)	1.579 (1.953)	1.009 (1.188)
R2	0.743	0.873	0.883	0.899	0.876	0.868	0.866	0.513	0.822	0.857	0.884
NO. of observations	33	80	80	80	74	73	73	74	67	64	59

Table 7 provides another estimation results for the factors affecting who gets which amount of aid for post-secondary education granted by France. As stated above, the result in Table 7 excludes China. An outstanding result is placed in TRADE variable. Without having China, the commercial relationship does not show constant coefficient, either positive or negative at significant level in all years. Instead, the magnitude of migration population and colonial status still keeps a positive sign. The more the size of foreign population inflows to France, the more France allocates aid for post-secondary education. Its tendency shown in Table 7 is greater than in the Table 6.

Table 8 and 9 depict the determinants of higher education ODA by Germany. The regression result including all recipients is placed in Table 8 while the result excluding China is shown in Table 9. In Table 8, what is the most striking result to emerge from the data is the dominant role of commercial relationship variable. It consistently appears to be distinct evidence in giving aid for higher education. Its impact is positive at significant level and the strongest while other variables show insignificant effects. How strongly its commercial ties influence the German decision to allocate higher education aid was not expected at such degree.

Such strong focus on economic relationships to invest German aid for post-secondary education shows its objective of promoting higher education: “Training tomorrow’s specialists and managers.” The rationale behind this is to make research findings relevant to business and industry as well as to improve financial positions of higher education institutions in Germany. According to the recent strategy paper published by BMZ(2012), *Ten Objectives for More Education: Education Strategy 2010-2013*, one of its strategic objectives is to “Promote higher education and research

for future elites¹⁹.” Formation of responsible elites for better partnership is based on the rationale that future elites receiving German academic opportunities through scholarships may contribute to encouraging more intensive foreign trade and intercultural relations between Germany and their countries. When it comes to the top recipient countries receiving German post-secondary education ODA, China is the first priority recipient country. China has grown to become one of Germany’s key trading partners and the pragmatic cooperation between the two countries is playing a leading role even in China-EU relationship.²⁰

Regardless of the economic tie’s determining power on post-secondary

¹⁹ In the section, more specific objectives are stated: formation of responsible elites for better partnership, promoting governance, fair educational opportunities, and knowledge share of its advantageous academic areas. The country has the rationale that

..., We need well-trained managers and professionals who can self-reliantly and responsibly assume ownership of processes of development and innovation in their own countries, and manage and implement these. Responsible elite of this kind is important to our partner countries, because it will enable them in the long term to free themselves from financial and technical dependency.....

Students and university graduates are often powerful advocates of human rights, democracy and innovation, as well as watchful critics of corruption and poor governance.

Many talented individuals in emerging and developing countries still do not get fair access to good university training that matches their aptitudes..... We are committed to achieving non-discriminatory access to all tertiary educational opportunities...

In German development cooperation in the higher education sector, we attach special importance to the German model of universities of applied sciences and vocational academies... We will also increase the mobility of students from developing countries and broaden the range of training opportunities available to them by providing scholarships (BMZ, 2013, p. 12).

²⁰ China is the second largest market for German exports after France. Germany has a strong share in the overall trade volume between Europe and China: up to nearly half of all EU exports to China and nearly a quarter of EU imports from China. Hans Kundnani and Jonas Parello-Plesn (2012).

education aid giving, the result of 2005 does not show any strong evidence compared to those of other years. As depicted in Figure 6, in 2005, German aid volume for total education shrinks and its portion for post-secondary education was also quite small. In terms of the top ten recipients, the year of 2005 shows a different trait that unspecified developing countries most received aid and new recipients emerged. Another distinct year is 2011. Unlike other years, none of the variables shows any significant effect in the year. The regression equation for the year, by the low values of R^2 , seems to lose explanatory power.

Looking more closely at coefficients, the variable in developmental motive category appears to be negative evidence in giving more aid for higher education in two years from 2003 to 2004. The lower GNI per capita the recipient country has, the more Germany gives aid for post-secondary education. However, the developmental motive represented by GNI per capita seems to have almost no effect. It is because the coefficient of trade relationship far outweighs that of GNI. None of the two explanatory variables characterizing the recipient countries' educational achievement and language proximity also has significant effect through all examined years. The outcome concerning migration presents rather unexpected effect. Migration variable does not have a significant sign, either positive or negative. Political environment in a recipient has a positive relationship with higher education aid granted by Germany in 2007 and 2008; however, the effect is hardly reflected due to strong effect of commercial relationship. Unlike France, in Germany colonial status does not play a statistically significant role in all given years. On the other hand, the cultural aspects captured by GOETHE variable show a modest positive relationship with aid for higher education,

but only at a significant level in four years.

In sum, socio-economic motives are the most important factor for Germany to grant aid for post-secondary education. Within this category, only commercial ties have dominantly strong effect at significant level. The trend remains consistent through the examined years. Another important factor is political/cultural motives in selected years. Within this motive, governance has a positive sign, but its effect is minor when compared with economic relationships. Academic/cultural information sharing by Goethe Instit plays a relatively modest role in allocating more aid for higher education.

Table 9 provides another estimation result of Germany without including China. Both of developmental motive and educational motive are not significant in all examined years. Educational purpose is not a determining factor in both estimated results of Table 8 and 9. On the other hand, it is surprising that the effect of commercial relationship has no constant sign at significant level in almost all years. It is remarkably distinct from its dominant effect shown in the regression result including China. Instead, in the socio-economic motive category, the annual size of foreign population inflowing into Germany becomes an important factor to determine the aid commitment volume for post-secondary education. In political/cultural motive, political governance in a recipient country shows a positive sign in some selected years while cultural motive is linked with more aid commitment for higher education in many years.

Table 8. Regression Results of Germany (1)

Germany Inc. China	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Year	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
GNI	-0.000 (-1.135)	-0.000 (-1.985)	-0.001* (-2.431)	-0.001** (-2.945)	-0.000 (-0.038)	-0.000 (-1.018)	-0.000 (-0.643)	-0.000 (-0.430)	0.000 (0.135)	-0.000 (-0.873)	-0.000 (-0.215)
STU	0.000 (0.663)	0.000 (0.330)	0.000 (0.089)	-0.000 (-0.332)	0.000 (0.548)	-0.000 (-0.701)	-0.000 (-0.089)	-0.001 (-0.811)	-0.000 (-0.536)	0.000 (0.593)	-0.004 (-1.452)
LANG	-2.775 (-0.884)	-1.000 (-0.315)	-0.552 (-0.079)	-0.552 (-0.079)	-0.079 (-0.270)	-1.481 (-0.272)	-1.221 (-0.222)	-2.350 (-0.362)	-3.315 (-0.527)	-1.324 (-0.271)	
TRADE	-6.022 (-0.418)	54.077*** (11.114)	86.886*** (15.615)	95.556*** (15.757)	0.772** (3.330)	91.601*** (19.383)	94.298*** (18.678)	90.553*** (18.136)	75.261*** (19.533)	60.584*** (24.594)	0.593 (0.038)
MIG	0.468** (3.075)	-0.046 (-0.350)	-0.256 (-1.220)	-0.303 (-0.967)	0.000 (0.038)	0.119 (0.322)	0.031 (0.069)	0.305 (0.687)	0.522 (1.376)	0.310 (1.169)	-2.257 (-0.783)
PRCL	0.594 (1.517)	0.545 (1.318)	0.739 (1.280)	1.144 (1.668)	-0.072 (-1.657)	1.353 (1.812)	1.749* (2.157)	1.910* (2.304)	1.431 (1.836)	0.963 (1.521)	1.661 (0.483)
COLONY	3.350 (1.366)	4.114 (1.543)	-0.140 (-0.032)	2.936 (0.687)	-0.036 (-0.161)	4.698 (1.395)	6.064 (1.593)	3.996 (1.017)	3.021 (0.865)	4.501 (1.474)	3.175 (0.141)
GOETHE	1.830 (1.991)	1.361 (1.579)	3.036* (2.627)	3.821* (2.526)	0.047 (0.721)	1.839 (1.325)	1.805 (1.238)	2.880 (1.803)	3.021* (2.031)	3.475** (2.980)	11.952 (1.695)
R2	0.383	0.771	0.848	0.854	0.247	0.916	0.921	0.917	0.917	0.949	0.106
NO. of observations	69	76	80	78	58	71	67	69	74	66	51

Table 9. Regression Results of Germany (2)

Germany Exc. China	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Year	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
GNI	-0.000 (-1.135)	-0.000 (-0.630)	-0.000 (-0.767)	-0.000 (-0.310)	-0.000 (-0.962)	-0.000 (-0.208)	0.000 (0.446)	0.000 (0.026)	0.000 (0.330)	-0.000 (-0.394)	-0.000 (-0.027)
STU	0.000 (0.663)	0.000 (0.605)	0.000 (0.074)	0.000 (0.344)	0.000 (0.601)	-0.000 (-1.262)	-0.000 (-1.222)	-0.001 (-1.257)	-0.000 (-0.679)	0.000 (0.199)	-0.004 (-1.517)
LANG	-2.775 (-0.884)	-3.028 (-1.016)		-6.042 (-1.075)	-0.032 (-0.105)	-4.456 (-0.856)	-5.604 (-1.068)	-5.383 (-0.824)	-5.155 (-0.798)	-3.660 (-0.748)	
TRADE	-6.022 (-0.418)	-2.872 (-0.175)	0.763 (0.039)	-10.501 (-0.602)	1.119 (1.443)	24.494 (1.096)	10.603 (0.413)	35.554 (1.245)	44.443 (1.702)	30.526* (2.006)	-67.130 (-0.598)
MIG	0.468** (3.075)	0.415* (2.366)	0.662* (2.413)	1.181*** (3.445)		1.244* (2.468)	1.717* (2.626)	1.290 (1.939)	0.976 (1.820)	0.663* (2.119)	-2.079 (-0.712)
PRCL	0.594 (1.517)	0.491 (1.289)	0.510 (0.993)	0.769 (1.396)	-0.072 (-1.676)	1.244 (1.793)	1.547* (2.058)	1.788* (2.201)	1.339 (1.714)	0.942 (1.527)	1.679 (0.485)
COLONY	3.350 (1.366)	3.830 (1.559)	-3.948 (-0.984)	2.814 (0.824)	-0.036 (-0.163)	3.754 (1.182)	5.227 (1.483)	3.059 (0.790)	2.442 (0.695)	3.713 (1.237)	0.790 (0.034)
GOETHE	1.830 (1.991)	2.560*** (2.976)	4.660*** (4.296)	5.604*** (4.517)	0.292 (0.393)	4.085** (2.734)	4.385** (2.821)	4.825* (2.606)	4.360* (2.346)	5.128*** (3.649)	16.162 (1.631)
R2	0.383	0.415	0.494	0.538	0.130	0.602	0.613	0.620	0.594	0.683	0.113
NO. of observations	69	75	79	77	57	70	66	68	73	65	50

The four tables below describe the annual results of the determining factors to allocate higher education aid by France and Germany. The first two tables illustrate the results when the regression data includes China while the last two tables show the results with having China excluded. The first two tables share a similarity in the positive effect of commercial relationship. This reflects the fact that higher education aid increases if economic ties between the donor and the recipient are strong. Both countries do not show statistically significant sign in educational objectives. Differences, however, are found in mainly migration, colonial legacy, and culture variables. France tends to increase post-secondary education aid to those with high inflow of migrated population to the country and those with former French colonial history. The finding concerning its colonial ties is consistent with the determinants of general aid flows investigated by several scholars. Germany, though in some years, allocates more aids to those with good governance and with close mutual understanding in a cultural term.

Based on the last two tables, it is striking that economic relationship does not play a significant role in giving more higher education aid any more in both donor countries. In economic motive, the case of China affects the determining factors. In addition, France and Germany tend to grant more aid for post-secondary education to the recipient countries having more inflow of their population to the donor country. The most distinct difference is found in the category of political/cultural motive. By excluding China in analysis, cultural factor in Germany becomes one of major determinants observed in many years.

Table 10. Brief Regression Results of France and Germany

France Inc. China	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
GNI											
STU									√		
LANG											
TRADE		√	√	√	√	√	√	√	√	√	√
MIG	√	√	√	√	√	√	√		√	√	√
PRCL											
COLONY		√	√	√	√	√	√	√	√		√
CAMPUS											
Germany Inc. China	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
GNI			√	√							
STU											
LANG											
TRADE		√	√	√	√	√	√	√	√	√	
MIG	√										
PRCL							√	√			
COLONY											
GOETHE			√	√					√	√	
France Exc. China	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
GNI											√
STU									√		
LANG											
TRADE											
MIG	√	√	√	√	√	√	√		√	√	√
PRCL											
COLONY		√	√	√	√	√	√	√	√		√
CAMPUS											
Germany Exc. China	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
GNI											
STU											
LANG											
TRADE										√	
MIG	√	√	√	√		√	√			√	
PRCL							√	√			
COLONY											
GOETHE		√	√	√		√	√	√	√	√	

CHAPTER 5. FINAL REMARK

France and Germany have granted a huge volume of aid for post-secondary education in the forms of scholarships/ fellowships and imputed student costs. This paper was to provide an empirical assessment of the determinants of ODA for higher education granted by France and Germany to developing countries. This study has found that the most important determining factors are socio-economic in both countries. France tends to donate more aid for higher education to those with close commercial relationships and with high flows of migrant populations coming to the country. On the other hand, migration factor is not a statistically significant in Germany; however, it is striking that commercial ties have dominant effect with a strongly positive sign. For both countries, another motivating factor is in political/cultural objectives. The results of the investigation show that colonial status plays a significant role in allocating higher education aid in France. In Germany, political governance in a recipient country and cultural relation is related with more aid allocated for higher education.

However, when it comes to eliminating a case of China, the result shows surprising differences from the previous model. Without China, for both donor countries, commercial relationship loses its determining power. Instead, colonial status is sustained as a determinant of higher education aid granted by France while cultural exchanges turns to be more constant determinant with a statistically positive sign in Germany.

The empirical findings in this study provides knowledge about the purposes and mechanisms of education aid in two donor countries by focusing on how higher education aid is given, where it is allocated, but also why it is granted. As revealed in the first section, this paper also has completed a preceding academic work to enhance the

effectiveness of education aid by its sub-sector through more predictable and strategic allocation and use. For future study, it would be interesting to investigate more on higher education aid allocated and its impact on capacity development in the context of aid effectiveness.

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Appendix 1: CRS Codes for Education

110	EDUCATION	
111	Education, level unspecified	The codes in this category are to be used only when level of education is unspecified
11110	Education policy and administrative management	Education sector policy, planning and programmes; aid to education ministries,
11120	Education facilities and training	Educational buildings, equipment, materials; subsidiary services to education
11130	Teacher training	Teacher education (where the level of education is unspecified); in-service and pre-
11182	Educational research	Research and studies on education effectiveness, relevance and quality; systematic
112	Basic education	
11220	Primary education	Formal and non-formal primary education for children; all elementary and first cycle
11230	Basic life skills for youth and adults	Formal and non-formal education for basic life skills for young people and adults
11240	Early childhood education	Formal and non-formal pre-school education.
113	Secondary education	
11320	Secondary education	Second cycle systematic instruction at both junior and senior levels.
11330	Vocational training	Elementary vocational training and secondary level technical education; on-the job
114	Post-secondary education	
11420	Higher education	Degree and diploma programmes at universities, colleges and polytechnics;
11430	Advanced technical and managerial training	Professional-level vocational training programmes and in-service training.

Appendix 2: List of Types of Aid

List of Types of Aid		
Type	Sub-type	Description
A		Budget support
	A01	General budget support
	A02	Sector budget support
B		Core contributions and pooled programmes and funds
	B01	Core support to NGOs, other private bodies, PPPs and research institutes
	B03	Contributions to specific-purpose programmes and funds managed by international organisations (multilateral, INGO)
	B04	Basket funds/pooled funding
C		Project-type interventions
	C01	Project-type interventions
D		Experts and other technical assistance
	D01	Donor country personnel
	D02	Other technical assistance
E		Scholarships and student costs in donor countries
	E01	Scholarships/training in donor country
	E02	Imputed student costs
F		Debt relief
	F01	Debt relief
G		Administrative costs not included elsewhere
	G01	Administrative costs not included elsewhere
H		Other in-donor expenditures
	H01	Development awareness
	H02	Refugees in donor countries

Appendix 3: Structures of Tuition Fees

Box C4.3. Structure of tuition fees

Tuition fee structure	OECD and other G20 countries
Higher tuition fees for international students than for domestic students	Australia, ¹ Austria, ² Belgium, ^{2,3} Canada, the Czech Republic, ^{2,4} Denmark, ^{2,4} Estonia, ² Ireland, ⁴ the Netherlands, ² New Zealand, ⁵ Poland, ² the Russian Federation, Sweden, ⁶ Turkey, the United Kingdom, ² the United States ⁷
Same tuition fees for international and domestic students	France, Germany, Italy, Japan, Korea, Mexico, ⁸ Spain, Switzerland. ⁹
No tuition fees for either international or domestic students	Finland, Iceland, Norway

1. International students are not eligible for government-subsidised places in Australia and therefore pay the full fee. While this typically results in international students having higher tuition fees than domestic students, who are usually given subsidised places, some domestic students in public universities and all students in independent-private universities are full-fee paying and pay the same tuition fees as international students.

2. For non-European Union or non-European Economic Area students.

3. In Belgium (Flemish Community), different tuition is allowed only if at least 2% of students in the institutions are from outside the EEA area.

4. No tuition fees for full-time domestic students in public institutions.

5. Except for students in advanced research programmes, or for students from Australia.

6. For students from outside EEA area and Switzerland.

7. In public institutions, international students pay the same fees as domestic out-of-state students. However, since most domestic students are enrolled in-state, international students pay higher tuition fees than most domestic students, in practice. In private universities, the fees are the same for national and international students.

8. Some institutions charge higher tuition fees for international students.

9. There is a negligible difference between the average annual tuition fees charged to domestic and mobile students.

Source: Education at a Glance (2013) p. 310

Appendix 4: Data Description

Variable	Code	Definition	Source
ODA for Higher Education	ODAFRA	Annual bilateral aid commitments to Post-secondary Education in recipient country	DAC-OECD
	ODAGER		
Developmental Objective	GNI	GNI per capita (PPP)	World Bank
Educational Objective	STU	Number of students in tertiary education per 100,000 inhabitants	UNESCO
	FLAN	French-speaking countries	http://www.frenchspeaking.com
	GLAN	Germany-speaking countries	http://www.mapsofworld.com
Socio-Economic Objective	TRADE	Percentage of bilateral trade between a recipient and a donor	ComTrade
	MIG	Inflow of foreign population by nationality	OECD
Political/Cultural Objective	PRCL	Mean of political right and civil liberty index	Freedom House
	COLONY	Colonial history of a recipient country by France	The World Factbook
	Campus	No. of Campus France or Goethe Institut/ logged population in a recipient country	http://www.campusfrance.org
	Goethe		http://www.goethe.de

국문초록

고등교육 양자 원조 배분에 관한 비교연구 프랑스와 독일을 중심으로

지난 20여년 동안, 교육분야 공적개발원조에 관한 논쟁은 기초교육의 원조량 증진 및 ‘만민을 위한 교육’ 달성에 많은 초점을 맞춰왔다. 새천년 개발목표의 선언 이래로 공여국들은 기초교육의 필요를 만족시키기 위해 많은 노력을 해왔다. 국제사회의 공적개발원조 정책과 원조 자원의 배분 차원에서 기초교육에 중점을 두면서 능력개발(capacity development)을 위한 고등교육의 중요성을 간과하였다. 이에 OECD 공여국들과 국제다자기구들은 빈곤감소, 혁신 및 경제개발의 영역으로 고등교육을 포함시키기 시작했다. 이는 장기적인 관점에서 고등교육이 발전과 관련된 모든 분야에서 필요한 전문적 인력을 양성함으로써 능력개발의 과정에 기여할 것이라는 생각에서 비롯되었다 (OECD and IBRD/The World Bank, 2007; Norad, 2005; Hotland and Ad Boren, 2005, 2012; Austrian Development Agency, 2009). 또한 이는 장기적으로 사회경제적, 문화적 발전, 민주주의와 굿 가버넌스 그리고 새천년개발목표의 성취를 증진시킬 것으로 기대한다.

이러한 고등교육과 능력개발의 관계를 기반으로 공여국들은 다양한 활동을 지원한다. 고등교육 원조의 형태는 주로 (1) 장학금, (2) 기관별 리서치 파트너십 및 네트워크, (3) 예산 지원 등이다(Hyden, 2010; Hotland and Boen, 2005). 고등 교육을 지원하는 원조의 양이 위와 같은 형태로 증가하면서 원조 효율성 분석이 필요한 현실이지만, 교육 세부분야에 관한 문헌은 원조 분배 요인 분석부터 효율성 및 영향력 분석까지 굉장히 제한적이다. 특히 고등교육에 분배된 원조의 효율성 분석은 프로그램 단위 또는 기관 단위에서만 이뤄지고 있다. 원조의 효율성을 분석하기 위해서 고등 교육 원조 배분을 하는 목적의 성취를 측정해야 하며, 이를 위해 고등교육 양자 원조 배분의 결정요인 분별이 선행되어야 한다.

이 연구에서는 고등교육 양자 원조의 주요 공여국인 프랑스와 독일의 원조 분배 결정 요인을 분석하였다. 양국은 새천년 개발목표에서 보편적 초등교육의 달성의 합의를 이룬 가운데 현저하게 고등교육에 원조를 지원하는 특징을 보여주는 공여국이다. 이 연구를 위해 2001-2011 년 동안

양국의 고등교육 원조가 누구에게 얼마만큼의 양으로 왜 배분되었는지 분석하였다. 먼저, Boeren et al. (2008)이 분류한 장학금의 4 가지 목적을 기반으로 고등 교육 양자 원조 분배의 결정 요인을 4 가지- 개발목적, 학문적 목적, 사회경제적 목적, 정치문화적 목적- 로 선정하였다.

각 공여국을 매년 회귀분석한 결과, 프랑스는 사회경제적 목적과 정치문화적 목적으로 배분하는 양상을 보인다. 프랑스는 경제관계가 깊을수록(총 무역량에서 차지하는 무역비중), 자국으로 이주하는 수원국 출신의 인구가 많을수록 그리고 식민지 관계에 있던 나라일수록 고등교육에 더 많은 원조를 주는 것으로 파악되었다. 프랑스는 프랑크폰 네트워크와 파트너십을 위해 전 식민 국가의 학생들에게 프랑스에서 고등교육을 받을 수 있도록 장학금 내지 간접 연수 비용(Imputed student costs)을 제공하여 많은 비판을 받아왔다. DAC Peer Review(2004)에서는 수원국의 학생이 자국으로 돌아가지 않을시 연수비용으로 책정된 데이터는 재조정되어야 한다고 권고하고 있다. 그럼에도 불구하고 고등교육 원조에 여전히 큰 선호를 가지고 있으며 2011 년에 발행한 원조 전략 문서에서는 지역적으로 아프리카를 초점맞추며 교육을 원조 중점 영역으로 공표하고 있다.

독일도 프랑스와 같이 사회경제적 목적과 정치문화적 목적이 있지만 큰 차이점은 경제관계가 지배적으로 주요한 분배요인이라는 것이다. 쿠틀레 문화원을 통한 문화적 영향력도 고등교육 원조분배요인으로 작용하지만, 경제관계가 깊은 나라일수록 많은 고등교육 원조를 주는 것으로 파악되었다. 독일은 기초교육을 중요시하며 보편적 초등교육의 달성을 위해 노력한다고 명시하였지만 교육원조 배분의 행태에서 고등교육의 선호가 현저하다. 2012 년 BMZ 가 발행한 *Ten Objectives for More Education: Education Strategy 2010-2013* 에서 전략적인 교육의 목적 중 하나로 “미래 엘리트를 위한 고등교육과 리서치 증진”을 꼽고 있다. 이는 더 나은 파트너십을 위한 책임있는 엘리트 형성, 가버넌스 증진, 평등한 교육 기회, 지식 공유의 목적으로 구체화된다.

위와 같은 프랑스와 독일의 회귀분석과 더불어, 수원국인 중국의 경우를 제외하고 회귀분석을 하였다. 이는 중국의 급격한 경제 성장과 큰 시장은 공여국으로 하여금 경제 파트너로서 개발협력의 동기를 제공할 것으로 가정하였기 때문에 결과를 비교하고자 함이다. 그 결과는 이전의 결과와 상이하게 도출되었다. 중국을 제외할 경우, 프랑스는 경제관계 변수가 영향을 미치지 않으며 자국으로 유입하는 인구가 많은 나라일수록, 프랑스의

식민지였던 나라일수록 더 많은 고등교육 원조를 받는 경향이 짙어졌다. 독일의 경우도 경제관계 변수가 고등교육 원조 분배의 결정요인에서 제외되었다. 대신 자국으로 유입하는 인구가 많은 나라와 독일의 문화교류 기회가 있는 나라일수록 더 많은 고등 교육 원조를 받는 것으로 나타났다.

이 연구는 프랑스와 독일의 고등교육 원조가 어떻게, 누구에게, 왜 분배되는지 분석함으로써 교육 원조 분배의 매커니즘과 목적에 대한 지식에 기여하였으며 좀더 예측가능한 전략적인 원조 분배와 사용을 통해 교육 원조의 효과성을 증진시키는 선행작업으로 역할을 하였다. 이를 기반으로 고등교육원조가 능력개발에 미치는 영향력 분석이 과제로 남아있다.

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주요어: 고등교육, 해외원조, 원조 분배, 양자 원조, 프랑스, 독일

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