DEPARTMENT OF POLITICAL SCIENCE
CENTRE FOR EUROPEAN STUDIES (CES)

EUROPEAN OFFICIAL DEVELOPMENT ASSISTANCE – EFFECTIVE OR NOT?

Human development outcomes in Sub-Saharan Africa with women's empowerment as a conditioning effect

Amna Handzic

Number of words: 10 250

Thesis:	Master's thesis 30 credits
Program:	MAES – Master's Programme in European Studies
Semester/year:	Spring/2022
Supervisor:	Monika Bauhr

Abstract

Aid effectiveness is one of the keys to achieving development and approaching sustainable development goals. Considering the limited field of research on the overall development outcomes of aid, this study examines the association between European Official Development Assistance (ODA) and human development in Sub-Saharan Africa. Additionally, in line with the importance of conditions for development, this study also seeks to investigate if the association between ODA and human development is contingent on the level of women's political empowerment. The empirical evidence on aid effectiveness is mixed, yet most research shows negative results. Many components affect aid effectiveness; therefore, it is a complex subject to study. Research on aid effectiveness is mainly restricted to outcomes in economic development, and studies that consider context often focus on, for example, democracy and corruption. Thereby, this study attempts to measure aid effectiveness, focusing on human development outcomes. Furthermore, this study highlights the importance of context and includes women's political empowerment as a conditional effect. This will be accomplished by utilizing a quantitative method with cross-sectional time-series analysis, including data from 2000 to 2020 retrieved from the Quality of Government and OECD. This study shows that there is a negative association between ODA and human development. Additionally, the results show that the association between European ODA and human development, conditional on women's political empowerment, is negative. However, this study implies a shift towards human development as a proxy for development and exploration of the relatively new interaction term on aid and women's political empowerment.

Content

Introduction

Foreign aid has historically had two purposes: achieving geopolitical goals desired by wealthier countries across the world while simultaneously supporting economic development in countries receiving aid (Morgenthau, 1962). The initial theories of how foreign aid could stimulate economic development were mostly mechanical, thinking that low savings rates created a financial gap that foreign aid could fill. Thus, accelerating the transition of poor countries into a self-sustaining economic growth cycle (Easterly, 2006). With the main objective of the United Nation's Millennium Development Goals, Sub-Saharan Africa is the most prominent donor investment target for developed countries, including European (Addison et al., 2005). European countries, alongside with the European Union, are the world's leading donor of development assistance and cooperation, where there is a common aim towards good governance, human- and economic development in developing countries (European Union, 2022). Europe is often perceived as a "power for good" and "peacebuilder" for the world. However, this normative approach is an important part of the European development. After the Cold War, the approach made it possible for Europe to embrace a leading role on the international arena, partly through general ethics, also institutionalized within the United Nations' system. The normative international context has contributed to important factors on the foreign policy agenda, including for example human rights, democracy promotion and humanitarian intervention (Aggestam, 2008).

Including Europe and Sub-Saharan Africa can potentially reflect aid effectiveness[1] overall, since they cover most of the aid flows. Over time, the empirical findings on aid effectiveness have been mixed. The majority of research on aid effectiveness show negative results, yet some studies points to beneficial results depending on the context. For example, Montinola and Prince (2018) found that there is a positive impact of aid on infant mortality, conditional on women's political empowerment. Previous research on aid effectiveness is to a large extent measured trough the effects of official development assistance (ODA) on GDP per capita. Not as many

[1] Aid effectiveness is defined the degree of success or failure of international aid (European Commission, 2022)

are using human development[2] as a proxy for development. Measuring aid effectiveness in GDP per capita does not capture a fair reflection of the development in Africa, while I argue that the human development index (HDI) captures a more versatile development, where having a long and healthy life, being knowledgeable and have a decent standard of living is included as well. Development in a country consists of many factors other than economic growth, and additionally, looking at results of economic growth can be misleading due to for example corruption. Therefore, this study seeks to examine the association between European official development assistance and human development in Sub-Saharan Africa. However, emphasizing the substantial meaning of context, this study also seeks to investigate if the association between European official development assistance and human development in Sub-Saharan Africa is contingent on the levels of women's political empowerment[3]. Empowered women raise their voices, practices their rights and uses their resources in order to make sure their priorities are considered in projects financed by foreign aid. Research on women's empowerment and economic development shows positive results where empowering women leads to changes in decision making, and in turn has a direct impact on development. However, the interaction term on aid and women's political empowerment is relatively new and unexplored.

This thesis provides a cross-sectional time-series analysis for the years 2000 to 2020, covering all European official development assistance to Sub-Saharan Africa. In sum, the results show that the association between European ODA and human development is negative in the unconditional models. The results also show that the association between European ODA and human development, conditional on women's political empowerment is negative. After all, since most of the previous research on aid effectiveness focus on the outcomes of foreign aid on economic growth, my thesis contributes to the shift towards further research on the outcome of foreign aid on human development. However, more importantly, my thesis contributes to the research field with a conditional effect of women's political empowerment.

[2] Human development is defined as development within the dimensions of a long and healthy life, knowledge and decent standard of living (UNDP, 2020)
[3] Women political empowerment is defined by the levels of women's civil liberties, participation in civil society and political participation (Coppedge et al., 2021)

Aim and research question

As the scholars disagrees on whether aid is effective or not, the aim with this study is first to test this paradox and examine the association between European official development assistance and human development in Sub-Saharan Africa. Additionally, this study aims to investigate if the association between European official development assistance and human development in Sub-Saharan Africa is contingent on the levels of women's political empowerment. Development assistance is a substantial part of European governments' budgets and following up on the outcomes is important for further development. The donor governments have to adapt their strategies to the development, regardless if it is positive or negative. At the same time, the recipient governments need to be aware of the effects of aid and adapt their priorities along with the outcomes. Thereby, my research questions are as following:

- What is the association between European official development assistance and human development in Sub-Saharan Africa?
- Is the association between European official development assistance and human development in Sub-Saharan Africa contingent on the level of women's political empowerment?

Previous literature and theory

This section provides a review of the existing literature in the research area. First, previous literature in the field of foreign aid effectiveness is presented. Aid effectiveness has a common concept, but the field is broad and divided. Therefore, different aspects are included. Second, aid effectiveness related to conditional associations is presented through the field of existing research. This is followed by the theoretical framework on outcomes of aid, as well as the conditionality by women's political empowerment.

Foreign aid effectiveness: An overview

The literature on the outcomes of development assistance is very divided, where results and arguments differ between those who believe aid is effective and those who do not. Additionally, there is also a side arguing for the aid effectiveness being dependent on the context. The majority of research provides negative results on aid effectiveness (i.e., Djankov et al., 2006; Kosack & Tobin, 2006).

Foreign aid has historically had the purpose to achieve geopolitical goals desired by wealthier countries across the world while simultaneously supporting economic development in aid-receiving countries. When providing foreign aid assistance, it is important for the donor to have a wide knowledge about the situation in the recipient country. This, in order to correctly adapt the assistance to the right needs, thus achieving aimed effects. The least developed countries will always indicate the need for aid, but the awareness of the situation has to be broader than that. If the aid is not adapted to the target, it might not be effective and can either lead to an unchanged or even worse situation. Additionally, aid flows by themselves will not develop a country in long term (Morgenthau, 1962). However, the initial theories of how foreign aid could stimulate economic development were mostly mechanical, thinking that low savings rates created a financial gap that foreign aid could fill, accelerating the transition of poor countries into a self-sustaining economic growth cycle (Easterly, 2006).

During the Cold War, aid organizations typically neglected concerns of governance, anti-corruption, and openness in their decision-making, owing to strategic objectives and a basic conception of foreign aid success. However, after the Cold War, foreign aid began to develop into a mechanism that could be used to promote sound economic policies. It was defined as policies that minimized the role of the state in economic management and it dominated the structural adjustment phase in the 1980's (Easterly, 2009). Recipient countries were then able to reduce fiscal imbalances due to structural adjustment funding. However, this came with terms that compelled governments to remove state structures and pursue market-oriented policies like deregulation and privatization. The underlying rationale was that market-friendly policies, macroeconomic stability, and trade openness would allow for a development shift (Zagha & Nankani, 2005).

As one more decade past, the foreign aid effectiveness was challenged by negative outcomes and critics. During the early 1990's, there were indications of setbacks in developing countries, regardless of the aim to encourage growth with foreign aid (Boone, 1996). Following, discussions begun, and a common claim was that the failure was caused by poor implementation rather than policy design (Svensson, 2003). This claim elevated the concern of political elites in aid-receiving countries and whether they cared about encouraging economic progress or were merely looking out for own benefits. Other claims to the failure that were raised, issued donors' incapability to put the reform to context, as well as donors' limitations in imposing the terms of structural adjustment programs (Easterly, 2005; Rodrik, 2006).

Following the structural changes in aid, further research was provided in the 2000's. The empirical evidence on the effectiveness of aid, according to Djankov et al. (2008), was disappointing. They came to the conclusion that aid can enhance government investment or consumption, with distinct implications on GDP. Government investment will result in increased growth, whilst government consumption will have the opposite effect. This result is based on the assumption that aid promotes consumption through rent-seeking activities while causing little, if any, investment growth. According to the authors, a low ratio of grants to loans promotes economic growth, but a higher ratio slows it down. As a result, loans with rigorous

repayment schedules can be used to ensure that investment rather than consumption is prioritized. When aid leads to increased government consumption, the country's balance of payments is functionally negative, but growth and development are unaffected (Djankov et al., 2008). Large aid flows can also deter governments from being accountable and perpetuate bureaucracy (Easterly, 2007). A quick inflow of aid is often viewed as a massive harvest of resources, triggering corruption, rent-seeking, and civil conflict. Due to the lack of retaliatory sanctions, punitive conditions on the dissemination, the granting of development assistance appear to be ineffective (Djankov et al., 2008; Kosack & Tobin, 2006).

This failure did not motivate donors to increase the development assistance, but rather to make it more effective, thus conditions in the recipient country became more and more important to consider. The situations with countries' conditions are however often contradictory. For example, countries with a high perception of corruption are often the ones in need of foreign aid, but the paradox is that foreign aid to countries with high perceived corruption often becomes ineffective due to the corruption. Ineffective aid and poor outcomes also follow by aid fatigue among donors. However, the objective for aid such as achieving the Millennial Goals and having moral imperative, will still be a motivator in cases where the public support for aid in the donor country is high enough (Bauhr, Charron & Nasiritousi, 2013).

Furthermore, Dijkstra (2018) argues that there are cases where foreign aid unintendedly undermines the quality of government (and potentially hinders development). For example, when the recipient governments undermine the need to tax their citizens as they receive foreign aid. Replacing taxes with foreign aid, instead of using it as an extra asset, will not contribute to a country's development. Additionally, taxation is also an important tool for encouraging citizen scrutiny of government and demands for acceptable government behavior, but the absence of taxation makes citizens less inclined to demand responsibility from an aid-receiving government. Furthermore, if the citizens lack in mobilization for holding the government accountable, there is also a lack of developed civil society. In sum, the unintended negative effects of aid, probably is less likely if donors are serious about their intended effects on for

example corruption or democratization, but also if donors are cautious about the risks of negative effects of aid (Dijkstra, 2018).

Additionally, transaction costs can also be diminished for developing countries that lacks in quality of government, especially when there are many donors involved. When government officials in the recipient country provides reports and attends meetings with donors, they might only develop abilities for the specific occasion, and not overall skills that could be utilized for improving the quality of government (Acharya et al., 2006; Knack & Rahman, 2007). In terms of salaries for highly capable individuals in the recipient countries, it can be a trap to hire them in non-governmental organizations where the salaries are provided by donors (and most likely higher). This could lead to empty seats in the government where the salaries are provided by the own country (and most likely lower). However, as previously mentioned, foreign aid can also raise the government salaries, which could lead to incorrect usage of positions in the government. Manipulation of public policy or economic conditions as a strategy for increasing individual profits among the elite, instead of using the assets for country development, can also be a consequence of foreign aid. In worst case scenario, such strategies can cause conflicts, also violent ones (Ahmed, 2012; Knack & Rahman, 2007).

On the positive note, some early studies confirmed that in cases where policies in recipient countries are good, the foreign aid is effective at promoting growth (i.e., Burnside & Dollar, 2000). These cases have a macroeconomic approach on the policy, measured in level of inflation, the size of the budget deficit, and the degree of trade openness. This led to encouragement in aid assistance to countries with quality in governance, but it was not as successful as predicted in raising people out of poverty. However, this type of aid encourages countries to take significant steps to support sound macroeconomic policies that the donor has identified. Burnside and Dollar (2000) developed their theory further and argued that factors such as arms imports and population would be able to anticipate exogenous to economic growth variance in assistance flows, allowing them to capture the causal effects of aid.

Burnside and Dollar's (2000) finding on the conditionality principle in foreign aid-giving, has continued to make appearance in the literature. For example, Mosley, Hudson and Verschoor (2004) found that donors may condition their aid on the quality of governance, motivated by the aim to contribute with aid to countries utilizing it correctly, as well as a tool for subsidiarity. There are positive outcomes on the development where recipient countries that are aware of the fact that donors condition their aid assistance on the levels of quality of government. Thus contingent on recipient governments believing that their aid allocations would increase on the condition that they implement governance improvements (Mosley et al., 2004).

Providing technical assistance as a form of development aid is also a type of conditionality principle. It serves the purpose to fund training and consulting services that strengthens governance procedures, which in turn can increase the presence of human capital to the recipient governments. By financing the provision of knowledge, equipment, and education, technical assistance seeks to directly strengthen state capability and in turn increase development (Jones & Tarp, 2016). Furthermore, if foreign aid fulfils its long-term goals of increasing education and promoting economic growth, the recipient human capital will rise, providing the government with a more capable workforce. As a result, improved quality of governance could be financed indirectly through conditioned foreign aid, if assuming that incentives are in place to encourage the government to hire skilled people who will then perform the expected services. In sum, conditional foreign aid can enhance government stability and survival (Dijkstra, 2018).

Previous research often points out the effectiveness of foreign aid as a matter of the recipient countries' conditions, and mainly focuses on economic and political conditions. Nevertheless, as most scholars agrees to, aid effectiveness is dependent on the conditions in the recipient countries (Burnside & Dollar, 2000; Kosack, 2003). So far, economic and political conditions have dominated the research field, while research specific to women's empowerment in relation to aid effectiveness is limited. Pitkin (1963) underlines that representation should not be about who the representative is, but about what the representative does. The ability of successful representation does not depend on the representative as a person, but the environment he or she

is present in. On the contrary, Sapiro (1981) highlighted the importance of female representation due to the idea of having politically relevant characteristics that define groups, which both those represented and those who represent them should be aware of. Both Pitkin (1963) and Sapiro (1981) were the foundation to research on women's empowerment the following years.

In response to Sapiro (1981), flaws have been pointed out. The main argument is that a representative need to be able to represent a whole community, and not just one interest. Furthermore, the idea concerned the assumption of women being a homogenous group is oblique, when in reality they all have different backgrounds and ethnicities and so on. Women's interests are not the same based on biology, and the greatest issue concerns the socially constructed identity assumption of women (Beckwith, 2014; Lovenduski, 2005). Women's interest range is naturally wide. However, common issues to some extent in certain policies are possible, for example abortion, but even in these cases the opinions can be different due to economical basis (Beckwith, 2014; Weldon, 2002). Thereby, which gender the representatives have does not automatically lean towards any specific output. All genders have the ability to support certain development (Reingold, 2008).

When it comes to the importance of what the representative does (Pitkin, 1967), Devlin and Elgie (2008) points out that more women in parliaments adds more dimension and new suggestions to the policy agenda, often regarding for example health issues. Empowered women raise their voices, practices their rights and uses their resources in order to make sure their priorities are considered in projects financed by foreign aid (Montinola & Prince, 2018). Furthermore, studies also show that women are more unlikely to engage in corrupt activities (i.e., Swamy et al., 2011), while Alatas et al. (2009) mean that it depends on the context and not on gender. More importantly, research on women's empowerment and economic development has shown positive results where empowering women leads to changes in decision making (Duflo, 2012). However, the research is not very extensive about the outcomes of women's empowerment, and insofar no research in regards of the of women's political empowerment in contingence with aid flows associated to development.

In sum, this overview shows the mixed results over time, but also how the context and conditions has become more important for aid effectiveness. First, as the outcomes of aid constantly varies over time, there has also been changes in structure and approaches. From basic mechanical processes in economic development, to donors and recipient countries cooperating towards common goals. Second, the raised awareness of conditions such as corruption, liberal democracy and representation, has been significant for the research on aid effectiveness. It is clear that context and conditions matter in achieving development.

Human development: What are the outcomes of aid?

Most research on aid effectiveness is measured trough the effects of official development assistance (ODA) on GDP per capita (i.e., Djankov et al., 2008), while fewer are using human development as a proxy for development. Measuring aid effectiveness in GDP per capita does not capture a fair reflection of the development in Africa due to for example income disparity (Bezuidenhout, 2009). Thirty years ago, United Nations Development Programme (UNDP) established a different way of learning about and measuring results of development. Rather than considering GDP growth as the main indicator of development, each country's human development was evaluated, and whether its citizens had the freedom and chance to live the lives they desire (UNDP, 2020). Growth and development are frequently utilized similarly in most economic research, despite the fact that they are fundamentally separate notions. Growth is measured in terms of GDP and GDP per capita, whereas development encompasses much more. Changes in wealth distribution, quality of life, living and income standards, and levels of social and human development are all reflected in human development (Kosack & Tobin, 2006).

There are different goals and means of development depending on the recipient countries' priorities. Thereby, there are also different tools for measuring a country's development for a fair judgement of the relative progress. Economic growth does increase the possibility for reducing poverty and other problems with underdevelopment when the wealth of a nation

increases. However, there are also examples where this is not the case. When economic growth in a country does not lead to human development, it can instead cause for example increased unemployment, lack of democracy and overconsumption of important resources (Soubbotina & Sheram, 2000). Economic growth by itself is not a success in a developing country. Rather, the economic growth has to be stabilized by other factors of the human development. For example, improvement of knowledge and skills, providing more working opportunities along with better working conditions, as well as promoting democracy at all levels in the society (Soubbotina & Sheram, 2000). The connections between growth and development are found to be inextricably intertwined. Household and government incomes increase substantially as a result from economic growth, which can lead to increased development investment by both. This in turn could lead to an improvement in human development (Ranis et al., 2000).

Stephen Kosack (2003) finds that democracy allows development aid to improve the human development. Additionally, the study shows that democracies without aid have lower of human development growth than autocracies. However, important to note is that the study shows no signs of aid harming the human development, but the possibility is not excluded. Kosack's (2003) results are also supported by the developed theories that democratic governments treat their citizens well or better than autocratic governments do. In comparison to autocracies, democracies have a higher percentage of educated population, higher political participation and competition, higher manufacturing wages and lower infant mortality rates (Brown, 1999; Frey & Stutzer, 2000; Rodrik, 1999; Zweifel & Navia, 2000). In order to succeed with aid to improve human development in democracies, the recipient government needs to have good resources (Kosack, 2003). Aid affects the development depending on governance, while governance is affected depending on the channeling of aid. Important to note is that projects are requiring elaborative decisions and conduction, which can potentially be overwhelming for the recipient's administrative system (Bigsten & Tengstam, 2015).

However, there are also examples of situations where aid flows and projects have been manageable. In a study performed by Bountagkidis et al. (2015) results show a significant positive relationship between EU official development assistance and development in Sub-

Saharan Africa on data from 2000 to 2010. Political stability as a result of transparency, accountability, and the rule of law, in particular, should be a favorable sign for donors when it comes to disbursing aid to governments of recipient states that respond to citizens' requests (Bountagkidis et al., 2015). However, Bountagkidis et al. (2015) agrees on the fact that aid is more effective in democracies but are not convinced that more developed democracies attracts more aid than the less developed. This is assumably being tied to the EU's security concerns in order to avoid potentially negative outcomes, such as increased migrant flows into Member States. It could also be ascribed to specific recipient states' receptivity to bilateral donor aid (Bountagkidis et al., 2015).

In sum, human development is more versatile in capturing the overall development in a country, yet it has been modestly used when measuring the outcomes of aid. As the theory suggests, outcomes of aid cannot be dependent on merely economic growth. It does not give a fair reflection of the development, nor does it take into account different aims of development assistance. I argue that official development aid should have a positive effect on human development. Thereby, my first hypothesis:

H_1 - "*Higher levels of European ODA should be positively associated with human development"*

Women's political empowerment: Does it enhance the effect?

Previous research often points out the effectiveness of foreign aid as a matter of the recipient countries' conditions, and mainly focuses on economic and political conditions. However, it has also been argued that women's empowerment in developing countries, strengthens the effect of foreign aid. Empowered women raise their voices, practices their rights and uses their resources in order to make sure their priorities are considered in projects financed by foreign aid (Montinola & Prince, 2018). More women in parliaments adds more dimension and new suggestions to the policy agenda, for example in Sub-Saharan Africa where women have prioritized health issues and property rights (Montinola & Prince, 2018). Furthermore, Devlin and Elgie (2008) performed a study on Rwanda, known for its high percentage of women in

parliament, examining the effect of increased women in parliament. The study confirms that women representatives in Rwanda added more dimension to the policy agenda and the increased representation of women also showed a small effect on the actual output (Devlin & Elgie, 2008). Women have, traditionally speaking, greater care taking responsibilities which has been socially prescribed. Therefore, it is expected for women representatives to prioritize certain issues such as public services, including education and health care (Mechkova, 2021).

Saprio (1981) stresses the importance of female representation due to the idea of having politically relevant characteristics that define groups, which both those represented and those who represent them should be aware of. However, this idea has its flaws since a representative has to represent a whole community, and not just one interest. Another flaw with the idea concerns the assumption of women being a homogenous group, when in reality they all have different backgrounds and ethnicities and so on. Therefore, one cannot argue that women's interests are the same based on biology, and the greatest issue concerns the socially constructed identity assumption of women (Beckwith, 2014; Lovenduski, 2005). Women's interest range is naturally wide. However, one can assume they have common issues to some extent in certain policies, for example abortion, but even in these cases the opinions can be different due to economical basis (Beckwith, 2014; Weldon, 2002).

When the aid is transferred from the donor to the recipient country, implementation is needed to provide benefits and actually develop the country forward. The aid is either channeled through non-governmental organizations or directly to the recipient government. Either way, if women are politically empowered, they can have an impact on the outcome of aid. Female officials can ensure that the aid resources are utilized in prioritized issues (Montinola & Prince, 2018). However, other researchers have argued that depending on the context, women too are capable of using their position of power in a wrong way, where the aid recourses could end up in wrong place (Alatas et al., 2009). In the contrary, other studies also show that women are more unlikely to engage in corrupt activities (Swamy et al., 2001). Women are also expected to control for how the aid recourses are disbursed, ensuring the flows being allocated into the right priorities (Devlin & Elgie, 2008; Montinola & Prince, 2018). Additionally, research on

women's empowerment and economic development shows positive results where empowering women leads to changes in decision making, and in turn has a direct impact on development (Duflo, 2012).

Empowering women can potentially be an advantage in the way towards achieving the development goals. The foreign aid is a tool along the way to the goals, and therefore in combination should lead to effective development. However, positive effects of women's representation are depending on several factors and it is important to understand the conditions under which female representation can achieve successful outcomes (Mechkova, 2021). Pitkin (1963) underlines that representation should not be about who the representative is, but about what the representative does. The ability of successful representation however does not depend on the representative as a person, but the environment he or she is present in. For example, positive effects on development might depend on the level of democracy in a country. Thereby, which gender the representatives have does not automatically lean towards any specific output. All genders have the ability to support certain development (Reingold, 2008). However, it does not only depend on the representatives. To achieve positive effects on the outcomes citizens has to be engaged too and demand change.

If women's political empowerment is strong, the policy outcomes should contribute to human development. Based on previous research, women add dimension to the policy agenda and gives attention to issues concerning human development factors, such as health and education. Theoretically, women's political empowerment along with development assistance should contribute to great outcomes in human development, because if women are politically empowered, they can ensure that the aid resources are utilized in prioritized issues. Furthermore, the theoretical framework, based on previous research, highlights the importance of conditions for aid to be positively associated with human development. I argue that positive aid outcomes on human development should be contingent on women's political empowerment. Thereby, my second hypothesis follows:

H_2 - "*The association between European ODA and human development should be stronger when women's empowerment is higher"*

Method, research design and data

To test my hypotheses, a quantitative method was applied and analyzed through cross-sectional time-series in Stata. Cross-sectional time-series data has the advantage that despite a small to moderate number of units recorded, they are recorded at several points in time. Meaning, the ability to capture both time effects but also effects between entities. This analysis covers data on European aid (ODA grants) to Sub-Saharan Africa between year 2000 to 2020, containing 520 observations and 26 countries. Including Europe and Sub-Saharan Africa can potentially reflect aid effectiveness overall. European countries, alongside with the European Union, are the world's leading donor of development assistance and cooperation, where there is a common aim towards good governance and human and economic development in developing countries (European Union, 2022). With the main objective of the United Nation's Millennium Development Goals, Sub-Saharan Africa is the largest donor investment target for developed countries, including European (Addison et al., 2005). Thus, Europe and Sub-Saharan Africa covers most aid flows.

Methodological approach

I am conducting a cross-sectional time-series study of selected countries over several years. Juselius, Møller, and Tarp (2014) addresses a problem with measuring aid effectiveness, being that almost all research includes the same data, yet we see different results due to different methodological approaches. Looking at the effectiveness of aid to Africa, the output often suggests it being ineffective due to the African people remaining among the poorest in the world, despite the huge aid flows. However, different methodologies give different output. For example, an ordinary least squares regression analysis where 34 African countries were included, only 8 countries could show that aid has a significantly positive effect on growth (Juselius et al., 2014). Most research on aid effectiveness utilizes country-based time-series analysis, rather than cross-country regressions (Juselius et al., 2014). This type of panel data analysis has the advantage of testing the same units of analysis over time, instead of focusing on point in time. This allows for analysis of different countries over time as compared to either different countries in a certain point in time in cross-sectional data, or one specific country over time in standard time-series data. Thereby, the chosen approach of panel data should

theoretically allow for more robust analysis and results. However, the negative aspect of the chosen approach of panel data concerns heteroscedasticity and autocorrelation. First, panel data implies heteroscedasticity, thus risks of biased results if the analysis is not controlled for individual heterogeneity. Second, autocorrelation is always an issue to have in mind when utilizing panel data. It can both cause problems in the statistical influence and showing false positives, thus the importance of providing tests in the model selection (Mehmetoglu & Jakobsen, 2022). Overall, as with all quantitative studies, the results are dependent on the data available, thus using different data sets can give different results. In conclusion, both theoretically and practiced, country-based evidence through panel data is a promising approach to estimate the aid effectiveness. Thereby, I assessed cross-sectional time-series as a valid approach for this study (Juselius et al., 2014; Mehmetoglu & Jakobsen, 2022).

Research design

After validating the methodological approach, this sub-section explains the model in depth. First, the way to the model selection is presented, including explanation of lags and tests provided. Second, the final model is exhibited through a model specification.

Model selection

First of all, all variables in my model except for the dependent, HDI, are recoded with a one-year lag as result of provided tests and theory (see appendix 1). Aid does not have any instantaneous effect on development (i.e., Juselius et al., 2014) and therefore the effect on HDI should be delayed. If it is expected that the current value of the dependent variable is substantially influenced by last year's value, it makes sense to add $t-1$ (the value of the dependent variable for the prior time point) on the right-hand side of the regression equation (Mehmetoglu & Jakobsen, 2022).

Further, when choosing estimator, the starting point was to run regressions and comparing the results between Between Effects (BE), Pooled Ordinary Least Squares (POLS), Random Effects (RE), Fixed Effects (FE) and First Difference (FD) (see appendix 2). With this

comparison, at first sight, model 3 and 4 with the POLS estimator are giving me the most significant results. However, doing the final analysis with POLS would not enable me to capture all individually specific effects between units and across time. There are also risks for omitted variable bias and assumption of the errors are iid (independent of each other), which can lead to false positives and heteroscedasticity (Mehmetoglu & Jakobsen, 2022). This concern could be erased by using for example fixed- or random effects instead, but to statistically test and exclude POLS, a Breusch-Pagan LM test was conducted. The test shows whether the variance of the errors from a regression is dependent on the values of the independent variables. In that case, heteroskedasticity is present and POLS should not be present for the final results (Breusch & Pagan, 1980). The Breusch-Pagan LM test was significant (see table 1 below); therefore, I should go for random effects rather than POLS.

Theoretically, I should use fixed effects since I want to investigate the change of variables over time. Furthermore, fixed effects enable investigating the relation between dependent and the explanatory variables within a unit, which in turn makes it possible to capture individual characteristics. Fixed effects only have a disadvantage when it comes to time-invariant variables, thus this does not concern my model. Moreover, random effects are also equivalent to fixed effects in terms of being consistent. Nevertheless, the main difference is that random effects are a better fit if there is no covariation between the error term and explanatory variables. Thereby, a Hausman-test was conducted to determine which of the two estimators to go forward with (Mehmetoglu & Jakobsen, 2022). The Hausman-test was significant (see table 1 below), indicating that the fixed effects are more consistent. Lastly, time-series cross-sectional data in most cases features autocorrelation which I checked for through the Wooldridge-test. As expected, the Wooldridge-test is significant (see table 1 below) and therefore indicating autocorrelation. Taking all the statistical tests into consideration, all of the time-series regressions were carried out with fixed effects and also clustered standard errors to account for the unobserved differences between countries.

Table 1: Breusch Pagan LM-, Hausman- and Wooldridge-test

Test	Result	Meaning
Breusch-Pagan LM	Prob > chibar2 = 0.0000	Heteroskedasticity RE>POLS
Hausman	Prob > chibar2 = 0.0018	Covariation between ε and x's FE>RE
Wooldridge	Prob > F = 0.0000	Autocorrelation

Table 1 shows the results of test provided for model selection.

Model specification

My elaborative model illustrates that the independent variable, aid (ODA) disbursements, should have an effect on human development. Further, my moderating variable, women's political empowerment, should have an effect on the unconditional relationship. Liberal democracy, ICRG Quality of Government and Military expenditure acts as control variables in this model. The general equation for cross-sectional time-series canned regression with fixed effects is following:

$$Y_{it} - \overline{Y}_i = \beta_1 X_{it} - \overline{X}_i + \varepsilon_{it} - \overline{\varepsilon}_i$$

Figure 1: Elaboration model

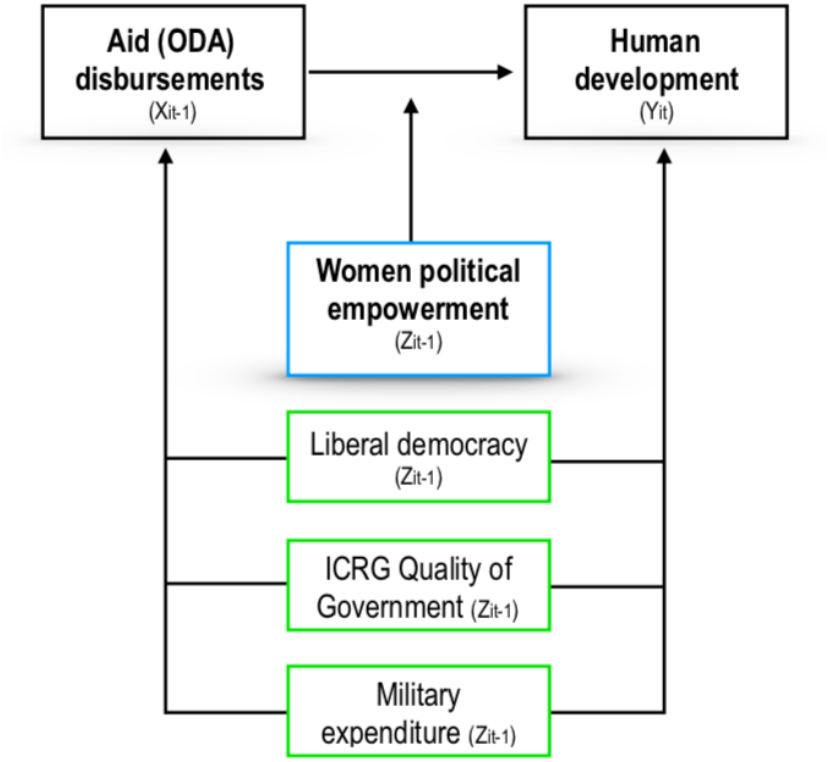

Figure 1 shows the general elaboration model for this thesis. It includes both an unconditional (black boxes) and conditional (black and blue boxes) relationship. The green boxes show the variables controlling the conditional and unconditional relationships.

Data

For this thesis, I have chosen data material from the Quality of Government Standard Time-Series Jan22 and OECD. The QoG Institute makes comparative data publicly available and provides aggregated data. The Standard data set, which I am using, is QoG's largest data set including more than 2000 variables. The QoG standard data set is available in time-series (TS) and the unit of analysis is country-year (Teorell, Sundström, Holmberg, Rothstein, Pachon & Dalli, 2021). The OECD data is one of the most common data recourses on aid (Juselius et al., 2014) and includes a large variety of countries and covers a great number of years (OECD-data, 2021). The data from OECD was merged to the QoG-data through the chosen countries (Sub-Saharan Africa) from year 2000 to 2020 (see table 2).

Table 2: Countries and years

Country	Year interval	Country	Year interval
Angola	2000 - 2020	Mozambique	2000 - 2020
Botswana	2000 - 2020	Namibia	2000 - 2020
Burundi	2000 - 2020	Niger	2000 - 2020
Cameroon	2000 - 2010	Rwanda	2000 - 2020
Comoros	2000 - 2019	Senegal	2000 - 2020
Congo	2000 - 2020	Seychelles	2020 - 2017
Democratic Republic of the Congo	2000 - 2020	Sierra Leone	2000 - 2020
Gabon	2000 - 2020	South Africa	2000 - 2020
Ghana	2000 - 2020	Sudan	2000 - 2010
Guinea	2000 - 2019	Togo	2000 - 2020
Liberia	2000 - 2020	Uganda	2000 - 2020
Madagascar	2000 - 2020	Zambia	2000 - 2020
Mali	2020 - 2019	Zimbabwe	2000 - 2020

Table 2 shows all Sub-Saharan countries and years available in the data of this study.

Dependent variable

For my dependent variable, I have chosen the human development index (HDI) from QoG standard TS jan22, originally retrieved from United Nations Development Program's human development data (UNDP, 2021), available from 1990 to 2019 for 188 countries. The Human Development Index (HDI) is a summary measure of average achievement in factors of human development being a long and healthy life, knowledge and a decent standard of living. These dimensions are based on three indices indicating life expectancy at birth, expected years of schooling/Mean years of schooling and GNI per capita. The HDI indicates very high human development on values over 0.8 and low human development on values below 0.55. Aid effectiveness is often measured in outcomes of economic development (see previous research). However, I chose to measure it in HDI since it captures a more versatile development.

Figure 2: Composition of human development index

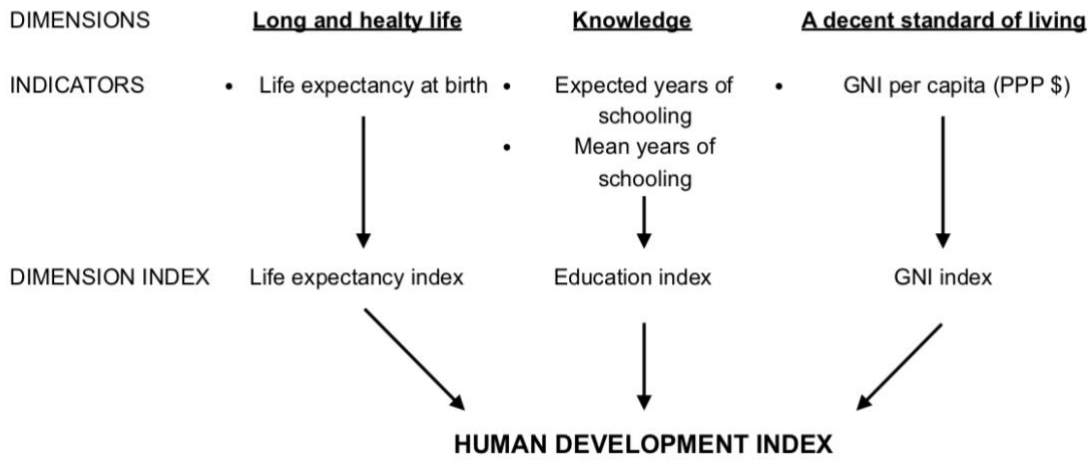

Figure 2 shows the composition of the human development index by UNDP (2020).

Independent variable

For my independent variable, I have retrieved data from OECD on Aid (ODA) disbursements to countries and regions, available from 1960 to 2020. The data shows destination of ODA disbursements in constant million US dollars (2019) and is geographically divided by donor, recipient and for some types of disbursement basis (OECD, 2021). For this thesis I have chosen to look at all European official development assistance disbursements from donors in total, and selected recipients, being the countries available from Sub-Saharan Africa. I chose the selection due to Sub-Saharan Africa being known as the region receiving the most aid.

Moderating variable

As my moderating variable, I have a women political empowerment index (WPE) from QoG standard TS jan22, originally retrieved from V-dem (Coppedge et al., 2021), available from 1946 to 2019 for 184 countries. The index is based on the question "How politically empowered are women?" and is formed by taking the average of women's civil liberties index, women's civil society participation index, and women's political participation index (Dieleman & Andersson, 2016). The index scale goes from 0 to 1 (low to high) (Teorell et al., 2022).

Identified research by Montinola & Prince (2018) close to my topic, uses three separate variables for measuring women's empowerment: Women's political participation, women's economic empowerment and women's social empowerment. However, they find that the political empowerment affects outcomes the most (Montinola & Prince, 2018).

Figure 3: Composition of women political empowerment index

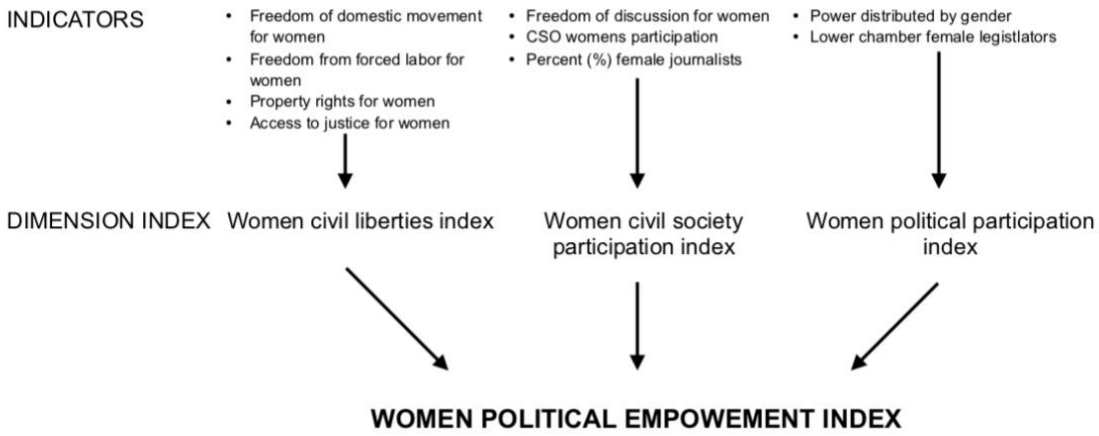

Figure 3 shows the composition of the women political empowerment index by V-dem (Coppedge et al., 2021).

Control variables

Further on, my control variables are based on frequency of use in previous research close to my topic (i.e., Bigsten & Tengstam, 2015; Devlin & Elgie, 2008; Duflo, 2012; Juselius et al., 2014; Montinola & Prince, 2018). The chosen control variables are all from the QoG standard TS jan22 (Teorell et al., 2022) and all of the descriptive statistics are presented in table 3. First, I have liberal democracy (LIBDEM), originally retrieved from V-dem (Coppedge et al., 2021), available from 1946 to 2020 for 184 countries. The index goes from 0 to 1 (low to high). First of all, higher levels of liberal democracy are most likely associated to higher levels of human development. Furthermore, liberal democracy can potentially be an underlying ground for the levels of ODA, since higher levels of liberal democracy can attract donors to invest. Additionally, WPE is associated to liberal democracies in regards of being known as more conscious about gender equality. Therefore, I chose to control for liberal democracy.

Second, I have ICRG Indicator of Quality of Government (ICRG) available from 1984 to 2020 for 147 countries. The variable is a mean value of the ICRG variables “Corruption”, “Law and Order” and “Bureaucracy Quality”, scaled from 0-1 where higher values indicate higher quality of government (Teorell et al., 2022). This control could be associated to both my conditional and unconditional relationship, in terms of all the components of the variable. Corruption levels, law and order issues, and governance quality can undermine human development, but also affect donors’ motivation. Additionally, higher quality of government is likely to be correlated to higher levels of women’s empowerment.

Lastly, I have military expenditure in percent of central government expenditure (MIL.EXP), originally retrieved from World Bank (2021), available from 1988 to 2020 for 164 countries. It includes all current and capital expenditures on the armed forces, including peacekeeping forces; defense ministries and other government agencies engaged in defense projects; paramilitary forces, if these are judged to be trained and equipped for military operations; and military space activities. Military expenditure could again affect donors’ decisions in aid allocation, and also affect human development in terms of prioritizing government expenditure to military issues. Levels of military expenditure is also likely to vary depending on women in parliament, thereby also WPE.

Table 3: Descriptive data

Variable		Mean	Std. dev.	Min	Max	Observations
HDI	overall	0.488466	0.1021032	0.262	0.789	N = 500
	between		0.0945417	0.32805	0.7481111	n = 26
	within		0.0424375	0.365766	0.577516	T-bar = 19.2308
ODA	overall	205.2403	257.3196	-0.35	2769.55	N = 520
	between		186.343	2.045238	690.5857	n = 26
	within		180.8904	-351.4921	2305.128	T-bar = 20
WPE	overall	0.7051462	0.15016	0.211	0.895	N = 520
	between		0.1486669	0.3400952	0.8737143	n = 26
	within		0.0517912	0.4374319	0.8353462	T-bar = 20
LIBDEM	overall	0.3043538	0.1750457	0.017	0.671	N = 520
	between		0.1704541	0.05275	0.6444762	n = 26
	within		0.0526648	0.0617824	0.4231634	T-bar = 20
ICRG	overall	0.3575836	0.1048473	0.1111111	0.6666667	N = 419
	between		0.1003912	0.1213624	0.5957892	n = 21
	within		0.0324924	0.2442128	0.4724426	T-bar = 19.9524
MIL.EXP	overall	7.322423	4.601178	1.079282	43.15519	N = 449
	between		4.471099	1.967619	24.78925	n = 25
	within		2.6396	-2.604861	25.68836	T-bar = 17.96

Table 4 shows the descriptive statistics on all the variables included in this study.

The descriptive data in table 3 provides in depth information about all variables. It shows the mean, standard deviation, minimum and maximum, as well as observations. Relevant to note is mostly the number of observations, where n = countries and N = n*years.

Results

What association does the European official development assistance have with human development in Sub-Saharan Africa? And is the association contingent on women's political empowerment? In this section, I present the final results answering this thesis' research questions. The results were reached by utilizing a cross-sectional time-series analysis with fixed effects (FE) and standard errors (SE), presented in table 4 below. Model 1 analyzes the unconditional association between European ODA and human development in Sub-Saharan Africa without control variables. Model 2 analyzes the same unconditional association as in model 1 but including control variables. Model 3 analyzes the conditional association between European ODA and human development in Sub-Saharan Africa, contingent on women's political empowerment. Model 4 analyzes the same conditional association as in model 3 but including control variables. All models include 1-year lags on the explanatory and control variables.

Table 4: Cross-sectional TS regressions with FE and SE

	(1) HDI	(2) HDI	(3) HDI	(4) HDI
ODA	-0.0000264 (0.0000184)	-0.0000436* (0.0000177)	0.0000514* (0.0000224)	0.0000504* (0.0000186)
LIBDEM		0.174† (0.0991)		-0.0137 (0.0791)
ICRG		-0.0218 (0.184)		0.0612 (0.155)
MIL.EXP		-0.00404* (0.00154)		-0.00196 (0.00146)
WPE			0.390*** (0.0872)	0.441*** (0.0759)
ODA # WPE			-0.000150** (0.0000535)	-0.000158** (0.0000470)
Constant	0.498*** (0.00395)	0.483*** (0.0720)	0.229*** (0.0609)	0.189* (0.0857)
R^2	0.0139	0.172	0.247	0.381
Observations	473	338	473	338
Countries	26	21	26	21

Standard errors in parentheses
† p<0.1, * p<0.05, ** p<0.01, *** p<0.001

Table 4 shows the final results.

Viewing the final results in table 4, I can first ascertain a non-significant association in the unconditional relationship between ODA and human development (HDI) in model 1. With the result of no significance, this model indicates that ODA is unrelated to HDI. When controlling for liberal democracy (LIBDEM), quality of government (ICRG) and military expenditure (MIL.EXP), the unconditional association between ODA and human development (HDI) in model 2 is negative. The coefficient of ODA (-0.0000436) can be interpreted as the expected change in HDI associated with a one-unit change in ODA within countries across time and is at significant at $\alpha = 0.05$. Getting significant associations when adding the control variables could be due to confounding, basically meaning that the control variables have some association to the independent variable. Thereby, with the unconditional models in this analysis, there is either no association or a negative association between ODA and human development. Thereby, I reject my H_1 - "*Higher levels of European ODA should be positively associated with human development"*.

Moving on to the conditional models, model 3 and 4 shows different results on the association between ODA and HDI, compared to model 1 and 2. When the conditioning effect is included in the models, there is a positive association between ODA and HDI in both model 3, without control variables, and model 4 with control variables. In model 3, the coefficient of ODA (0.0000514) can be interpreted as the expected change in HDI associated with a one-unit change in ODA within countries across time, conditional on WPE = 0, significant at $\alpha = 0.05$. In model 4, the coefficient of ODA (0.0000504) can be interpreted as the expected change in HDI associated with a one-unit change in ODA within countries across time, conditional on WPE = 0, significant at $\alpha = 0.05$. Since the effect of ODA on HDI is not direct in these results, it is important to note that they do not test my H_1. However, the results are econometrically interpreted, as a natural part of model 3 and 4.

Looking further at model 3 and 4, the results show positive associations between women's political empowerment (WPE) and HDI, when the conditional effects is included in the models. In model 3, the coefficient for WPE (0.390) can be interpreted as the expected change in HDI associated with a one-unit change in WPE within countries across time, conditional on ODA =

0, significant at $\alpha = 0.001$. In model 4, the coefficient for WPE (0.441) can be interpreted as the expected change in WPE associated with a one-unit change in ODA within countries across time, conditional on ODA = 0, significant at $\alpha = 0.001$. Important to note with these results, is that WPE is not tested as contingent to the association between ODA and HDI, thus it cannot test my H_2. However, the results are econometrically interpreted, as a natural part of model 3 and 4.

Lastly, I have reached the results on the moderating effect. In model 3 and 4, there are significance at $\alpha = 0.01$ on the interaction terms. However, the association is negative. In model 3, the interaction coefficient (-0.00150) can be interpreted as the effect WPE has on the association between ODA and HDI within countries across time. Since the effect is negative, the effect of ODA on HDI decreases as WPE increases. The effect of WPE on HDI decreases as ODA increases. In model 4, the interaction coefficient (-0.00158) can be interpreted as the effect WPE has on the association between ODA and HDI within countries across time. Since the effect is negative, the effect of ODA on HDI decreases as WPE increases. The effect of WPE on HDI decreases as ODA increases. These results reject my H_2 - "*The association between ODA and human development should be stronger when women's empowerment is higher"*.

To summarize, with the results provided in this study, H_1 and H_2 were rejected. Within this data set, higher levels of European ODA are not positively associated with human development. Further, the association between ODA and human development is not stronger when women's empowerment is higher. However, with the data available in model 4, interesting hypothetical results are provided through predicted margins of the interaction term is provided (see figure 4).

Figure 4: Margins plot on the predicted interaction in model 4

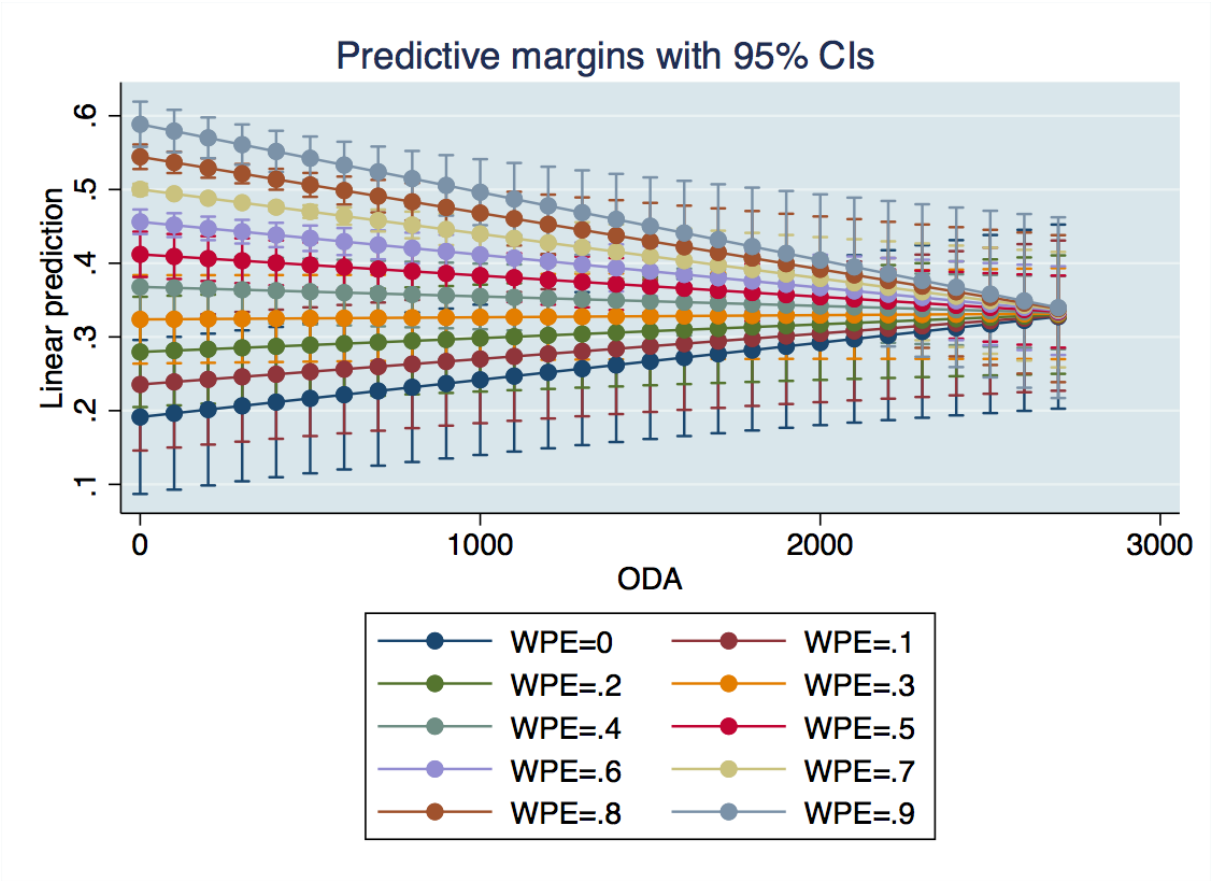

Figure 4 shows the predictive margins with 95% Cls on the interaction between ODA and WPE on HDI in model 4.

To visualize the results on the interaction on model 4, I provided a graph on the predictive margins (see figure 4). The predictive margins plot shows the linear prediction of certain levels of WPE, given a certain value of ODA on HDI. The same applies to certain values of ODA, given a certain level of WPE on HDI. For example, the green line for when WPE equals 0.2, shows that the linear prediction increases when ODA also increases. The red line for when WPE equals 0.5, shows that the linear prediction decreases when ODA increases. Up until when WPE approximately equals 0,3, the association is positive. However, on the WPE levels over approximately 0,3 the association is negative, which is also interpreted in the final results. Important to note, in the data set there are no WPE values below 0,211 or above 8.895. The linear predictions outside that range are therefore only hypothetical.

Conclusions

This study examines the association between European official development assistance and human development in Sub-Saharan Africa. Additionally, this study investigates if the association between European official development assistance and human development in Sub-Saharan Africa, is contingent on women's political empowerment. Utilizing a cross-sectional time-series analysis with data including European official development assistance to Sub-Saharan Africa between the years 2000 to 2020, the results indicate negative associations to the human development. The association between European official development assistance and human development in Sub-Saharan Africa is negative in the unconditional models where effect is direct. Further, the conditional models with moderating effect, show that the association between European official development assistance and human development in Sub-Saharan Africa is not contingent on women's political empowerment. In this study, I reject my hypotheses on the association between ODA and HDI, as well as the association's contingences on WPE. However, the results are a foundation for further discussion.

Following up on the outcomes of aid and understanding the conditions for the outcomes is important since development assistance is a substantial part of European governments' budgets. As European countries, alongside with the European Union, are the world's leading donor of development assistance and cooperation, there is also a common aim towards good governance and human and economic development in developing countries (European Union, 2022). This is in line with the main objective of the United Nation's Millennium Development Goals which targets the aim for development in Sub-Saharan Africa (Addison et al., 2005). In order to reach aid effectiveness and enable further development, the donor governments have to adapt their strategies to the development, regardless if it is positive or negative. At the same time, the recipient governments need to be aware of the effects of aid and adapt their priorities along with the outcomes. Since most of the previous research on aid effectiveness focusses on the outcomes of foreign aid on economic growth, my thesis contributes to the shift towards further research on the outcome of foreign aid on human development regardless of the results. When shifting from economical outcomes to overall outcomes in human development, the results reflects a more versatile picture of the development in a country. In this study, the versatile

picture shows that European official development has a negative association to the human development in Sub-Saharan Africa.

Previous research and the debate on aid effectiveness are divided, yet the majority leans towards negative outcomes of aid. My results on the unconditional relation are consistent with the previous research, showing a negative association between European official development assistance and human development in Sub-Saharan Africa. Theoretically, the least developed countries will always indicate the need for aid. However, if the aid is not adapted to the target, it might not be effective and either lead to an unchanged situation, or even worse. Additionally, aid flows by themselves will not develop a country in long term (Morgenthau, 1962). The failure of aid can also be caused by poor implementation (Svensson, 2003), dependent on political elites in aid-receiving countries and whether they care about encouraging economic progress or are merely looking out for own benefits. Further, failure can devolve upon donors' incapability to put the reforms into context (Easterly, 2005; Rodrik, 2006). Large aid flows can be overwhelming, but can also lead to increased government consumption, and thereby no visible positive outcomes (Djankov et al., 2008). It can also deter governments from being accountable and perpetuate bureaucracy (Easterly, 2007). In sum, quick inflow of aid is often viewed as a massive harvest of resources, triggering corruption, rent-seeking, and civil conflict. Due to the lack of retaliatory sanctions, punitive conditions on the dissemination, the granting of development assistance appear to be ineffective (Djankov et al., 2008; Kosack & Tobin, 2006). Using human development as a proxy for development should give us a fair reflection of the overall development. However, on an unconditional basis in this study, results show that aid has a negative association to human development, which theoretically should be seen as the reflection on overall development. On another note, statistically, the negative significant associations between aid and human development, could be due to confounding when control variables were added. However, as for example Kosack (2003) highlighted, beyond aid on its own, other factors plays a role in the human development.

Therefore, this study also considers whether the outcomes of aid on human development, is contingent on women's political empowerment. In my conditional models with moderating

effect, results show a negative association between aid and human development, contingent on women's political empowerment. Within this study, it means that the outcomes of aid on human development is not contingent on women's political empowerment. Regardless of the results, this part of the study contributes to the relatively new and unexplored interaction term on aid and women's political empowerment. Having women representatives does not automatically lean towards any specific output. All genders have the ability to support certain development (Reingold, 2008). However, it is shown that more women in parliaments adds more dimension and new suggestions to the policy agenda, often regarding public services, including education and health care, which can be expected since women are traditionally speaking, greater care taking responsibilities which has been socially prescribed. Empowered women raise their voices, practices their rights and uses their resources in order to make sure their priorities are considered in projects financed by foreign aid (Montinola & Prince, 2018). Furthermore, studies also show that women are more unlikely to engage in corrupt activities (i.e., Swamy et. al., 2001). Research on women's empowerment and economic development has shown positive results where empowering women leads to changes in decision making (Duflo, 2012), which in extension should lead to human development if we think about the issues women prioritize. Theoretically, the association between ODA and human development should be stronger when women's empowerment is higher, but within this study and the available data used, the results shows the opposite.

Beyond these results, an interesting hypothetical finding was made in this study. Since interaction effects are difficult to interpret, a graph of the predictive margins on the interaction between ODA and WPE on HDI was provided (see figure 4). Within this study and the used data, the predictive margins show that the effect of ODA on HDI is negative when the WPE levels are over approximately 0.3, reflecting the final results presented. However, WPE levels up until approximately 0.3, shows a positive association. I do not include this in my final results, as it is only predicted margins, but it is a foundation for discussion. Hypothetically, I believe that the effect of women's political empowerment on the relation between aid and human development reaches a plateau when it comes to a certain level. This type of plateau occurs in for example newly developed democracies. Furthermore, it can be intertwined with conditionalities from donors. For example, Mosley et al. (2004) found that donors may

condition their aid on the quality of governance, motivated by the aim to contribute with aid to countries utilizing it correctly, as well as a tool for subsidiarity. Thus, positive outcomes are contingent on recipient governments believing that their aid allocations would increase on the condition that they implement governance improvements (Mosley et al., 2004).

In concluding remarks, this study shows that the association between European official development assistance and human development in Sub-Saharan Africa is negative. Additionally, this study shows that the association between European official development assistance and human development in Sub-Saharan Africa is not contingent on women's political empowerment. These results can potentially reflect aid effectiveness overall, since Europe and Sub-Saharan Africa covers most aid flows in the world. The study has made an important contribution to the shift towards using human development as a proxy for development. More importantly, this study has contributed to a relatively new and unexplored interaction term on aid and women's political empowerment.

Limitations and further research

For this study, the limitations are mostly dependent on data. The specific data set that I have used are the foundation for my results, whereas other data sets could have generated different results. Furthermore, I have a specific sample of countries, where I only include European countries as donors, and Sub-Saharan countries as recipients. Including different countries can potentially lead to different results. I have also applied one-year lags on all explanatory variables since the effect of aid should be delayed. However, with other data, tests could have indicated other optimal lags. Data frequency can also give different results; I use yearly data, but quarter- or monthly data can also be utilized. The choice of variables also plays a role in limitations. First, there are different types of aid data in different measures. Second, human development outcomes are potentially different from outcomes in for example economic development or infant mortality rates. Third, including women's political empowerment can vary from results when using women in parliament, or women's civil society organization participation. Lastly, the choice of control variables can make major differences in results. I suggest further research to have these limitations in mind, but especially keep contributing with

research on the interaction term on aid and women's political empowerment. This can be included in studies utilizing other data, but also in models with other dependent and/or control variables. Apart from that, I also suggest keeping on using human development as a proxy for development outcomes of aid. Here, other data sets and other control variables can be utilized. Additionally, the aid data can also be retrieved from other sources, and can include other types of development assistance, beyond exclusively ODA total grants in million US dollars.

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Appendix

1. Lag tests

Sample: 2004 thru 2020 Number of obs = 17

Lag	LL	LR	df	p	FPE	AIC	HQIC	SBIC
0	-93.0107				3723.2	11.0601	11.065	11.1091
1	-87.7711	10.479*	1	0.001	2263.19*	10.5613*	10.5711*	10.6593*
2	-87.4747	.59293	1	0.441	2464.97	10.6441	10.6587	10.7911
3	-87.2047	.53999	1	0.462	2700.17	10.73	10.7495	10.926
4	-87.1641	.08111	1	0.776	3049.9	10.8428	10.8672	11.0879

* optimal lag

Endogenous: ODA

Exogenous: _cons

Sample: 2004 thru 2019 Number of obs = 16

Lag	LL	LR	df	p	FPE	AIC	HQIC	SBIC
0	-41.4874				.787015	5.43592	5.44087	5.53249
1	-6.14995	70.675	4	0.000	.015795	1.51874	1.53358	1.80846*
2	-3.53812	5.2237	4	0.265	.019444	1.69227	1.71699	2.17513
3	.204387	7.485	4	0.112	.021824	1.72445	1.75907	2.40047
4	9.22912	18.049*	4	0.001	.013795*	1.09636*	1.14087*	1.96552

* optimal lag

Endogenous: ODA HDI

Exogenous: _cons

Sample: 2004 thru 2019 Number of obs = 16

Lag	LL	LR	df	p	FPE	AIC	HQIC	SBIC
0	136.479				3.3e-15	-16.3098	-16.295	-16.0201
1	227.681	182.41	36	0.000	4.9e-18	-23.2102	-23.1063	-21.1821
2	.	.	36	.	1.4e-65*	.	.	.
3	3097.5	.	36	.	.	-375.188	-374.95	-370.552
4	3132.75	70.494*	36	0.001	.	-379.594*	-379.356*	-374.958*

* optimal lag

Endogenous: ODA HDI WPE LIBDEM ICRG MIL.EXP

Exogenous: _cons

Appendix 1 shows the test provided for choosing lags.

2. BE, POLS, RE, FE and FD regressions

	(1) BE	(2) BE	(3) POLS	(4) POLS	(5) RE	(6) RE	(7) FE	(8) FE	(9) FD	(10) FD
ODA	-0.000141 (0.0000936)	0.000907* (0.000406)	-0.0000874*** (0.0000171)	0.000228*** (0.0000473)	-0.0000278** (0.0000105)	0.0000550* (0.0000240)	-0.0000264* (0.0000105)	0.0000504* (0.0000237)		
WPE		0.384 (0.245)		0.194*** (0.0490)		0.418*** (0.0432)		0.441*** (0.0442)		
ODA # WPE		-0.00140* (0.000587)		-0.000456*** (0.0000746)		-0.000167*** (0.0000426)		-0.000158*** (0.0000423)		
D.WPE										0.0467** (0.0174)
LIBDEM		-0.106 (0.146)		-0.0362 (0.0347)		-0.0258 (0.0426)		-0.0137 (0.0444)		
D.LIBDEM										0.00621 (0.0142)
ICRG		0.682** (0.221)		0.423*** (0.0476)		0.0730 (0.0551)		0.0612 (0.0578)		
D.ICRG										0.0324 (0.0289)
MIL.EXP		-0.00503 (0.00523)		-0.00256* (0.00114)		-0.00185* (0.000743)		-0.00196** (0.000741)		
D.MIL.EXP										-0.000197 (0.000197)
D.ODA									-0.00000113 (0.00000170)	-0.00000274 (0.00000231)
D.ODA # D.WPE										0.0000133 (0.0000587)
Constant	0.522*** (0.0268)	0.0593 (0.190)	0.511*** (0.00582)	0.252*** (0.0347)	0.498*** (0.0181)	0.208*** (0.0391)	0.498*** (0.00295)	0.189*** (0.0385)		
r2	0.0866	0.513	0.0525	0.360			0.0139	0.381	0.000987	0.0443
Observations	473	338	473	338	473	338	473	338	446	306
Countries	26	21			26	21	26	21		

Standard errors in parentheses
† p<0.1, * p<0.05, ** p<0.01, *** p<0.001

Appendix 2 shows the results of regression analysis at a bivariate and multivariate level with all estimators.