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EU Development Aid towards Sub-Saharan Africa: Exploring the Normative Principle

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Abstract: The EU and most aid donors invoke a strong normative power face by explicitly connecting foreign aid with human and social development. However, how well the EU's rhetoric is consistent with its practices as a multilateral development actor has not been explored extensively. In this study, we challenge the normative dimension of the EU's development policy and explore whether the EU's Official Development Assistance to Sub-Saharan Africa is based on objective deprivation on the part of recipient countries or whether it is "interest driven". We use a least squares dummy variable model regression to examine aid flows from the EU to all 48 Sub-Saharan African states for the period 2000 to 2010. The evidence found indicates that in certain instances, aid allocation contradicts the normative rhetoric that the EU uses to describe its development policy, as the donor's own interests in the region seem to supersede priority given to the needs of the aid recipient states. A limitation to the findings is the fact that normative values and strategic interests are not mutually exclusive. Nevertheless, the present study suggests that the EU's portrayal as a force for good in international relations requires cautious critique.

Keywords: European Union; foreign aid; development; normative power; Sub-Saharan Africa

1. Introduction

Development aid was first introduced as a concept in the post-World War II era. President Harry S. Truman stated it as "a bold new program for making the benefits of our scientific advances and industrial progress available for the improvement and growth of underdeveloped areas" [1]. Foreign aid has been debated with regards to its efficiency and its purposes, producing a fragmented literature and political standpoints. Recent commentaries have noted that foreign aid is losing the battle against poverty. This is particularly true in Sub-Saharan Africa, where attainment of the UN Millennium Development Goals looms dark as progress lags behind aspirations [2]. Development aid has been subjected to criticisms regarding its prevailing orthodoxy within a macroeconomic context. This, however, is counter-argued by an ethically-charged discourse presenting the idea of "development aid" as a learning institution open to dialogue and change, with lessons to learn. The EU falls within this category, *i.e.*, learning institution, and despite the fact that it is the largest aid donor in the world, lessons do not seem to be learnt, as very little progress in the development of recipient states has been recorded [2–5].

The aim of this study is to explore whether the EU's development policy towards Sub-Saharan Africa is consistent with the normative power rhetoric that the EU utilizes to describe itself in foreign relations. We examine this aspect using a quantitative methodology. The EU constructs its image as a normative actor, *i.e.*, force for good, by espousing certain normative principles that guide its development policy and by claiming giving priority to addressing recipient states' needs. However, a large part of the foreign aid literature attributes a more pragmatic stance to the EU, stressing political and economic interests as the primary objective of its development policy [6,7]. We contend that the latter argument is more convincing and challenge the normative aspect of the EU's development policy towards Sub-Saharan Africa.

The following section gives an overview of the existing literature on EU development policy, generating certain hypotheses that will be examined. We try to uncover the EU's motivations and look at how official development assistance (ODA) for the period 2000–2010 is affected by certain factors within the aid recipient countries. We find considerable evidence that macroeconomic variables are more significant predictors than humanitarian ones.

2. Literature Review

The literature on foreign aid continues to grow exponentially despite the fact that researchers keep finding the same disappointing effects that foreign aid has on economic growth [8], and it is this paradox that inspires researchers to continue investigating [9]. The literature on foreign aid can be distinguished into two branches, one that studies the effects of foreign aid on the recipient countries and another that investigates the determinants of foreign aid, *i.e.*, which donor gives to which recipient and why [7]. This paper would be classified in the second branch, as the explanation of EU aid flows is our main interest and not their effectiveness. Doucouliagos and Paldam [8] analysed the most recent studies of aid effectiveness on growth, and they found that, on average, development aid flows are ineffective at generating growth. One can argue that the allocation of foreign aid can be understood to be conducted on an ethical basis [10]; however, this comes into conflict with a vast literature on foreign aid that asserts that this disconnect between aid and economic growth is explained by strategic foreign policy concerns [11]. Furthermore, in a recent study, Bearce and Tirone [12] have found that foreign aid can promote economic

growth in recipient countries by facilitating economic reform, but only when the strategic benefits associated with providing aid are small for donor governments. Unfortunately, as Alesina and Dollar [7] point out, the measurement of what a "strategic interest" is is not consistent from study to study and can be occasionally tautological, which has resulted in a fragmented literature; nevertheless, there is some general agreement about what matters for aid giving.

2.1. Theories of Aid

Aid is the "transfer of resources on concessional terms—on terms that are more generous or 'softer' than loans obtainable in the world's capital markets" [13]. The IMF defines ODA as:

Flows of official financing administered with the promotion of the economic development and welfare of developing countries as the main objective, and which are concessional in character with a grant element of at least 25 percent (using a fixed 10 percent rate of discount). By convention, ODA flows comprise contributions of donor government agencies, at all levels, to developing countries ("bilateral ODA") and to multilateral institutions. ODA receipts comprise disbursements by bilateral donors and multilateral institutions. Lending by export credit agencies—with the pure purpose of export promotion—is excluded [14].

There are three main theoretical schools prevalent in the aid literature, realism, idealism and liberalism, which vary in their motivations, means and goals [15]. Realists argue that foreign aid is shaped by governmental policies promoting and placing imperatives on political and economic national interests [6]. Foreign aid has re-emerged in the EU's foreign affairs after the 9/11 events in the U.S., predominantly due to the international war against terrorism, which resulted in prominent EU member states (Germany, France, U.K.) prioritizing security-related elements in their bilateral development assistance relations. Economic interests are also advocated as strong incentives for foreign aid, as former colonies of European member states receive aid and acquire privileged access to natural resources and markets. Thus, realist commentators advocate that development aid is dictated in large by political and strategic considerations, which have little to do with rewarding good policies, without however neglecting essential norms and values of development aid [7,16,17].

From the perspective of idealism, foreign aid is driven by immaterial motivations, such as altruism and moral obligation. Unlike realists, who construe peace as the balance of power, idealists or liberal idealists emphasize human nature and the potential for peace emanating from international institutions and law. In such cases, donors transfer foreign aid to developing countries with low human and social development. The main conviction of idealism is that there is an objective effort made towards improving human welfare; therefore, foreign aid constitutes a beneficial contribution. A closely related concept is "humane internationalism", which sees a dialectic relationship between moral obligation and national interest [3,15,18].

Finally, liberals emphasize the domestic dimension of foreign aid. Domestic factors, such as political parties, NGOs and bureaucracies, are significant determinants in understanding the quality and quantity of aid. Donor bureaucracies have the capacity to push for the expansion of aid budgets and are considered to have a considerable effect on donor coordination in aid allocation, as they can often be reluctant in

the implementation of projects and programs. Finally, one of the primary goals of NGOs is to raise awareness on issues regarding development through campaigns and various projects [10,19,20].

2.2. EU Normative Power

EU foreign policy in the post-Cold War era is shaped by liberal and idealist notions, and EU actors engage in constructions of the EU as a force for good. The EU's portrayal as a force for good is an expression of its attempt to construct its image as a normative power. The EU's normative power is understood as a practice by which the EU seeks to spread its core norms, such as human rights, democracy, rule of law and environmental protection, internationally [21]. This type of policy has also been termed as soft power: "the ability to get what you want through attraction rather than coercion" [22,23]. The primary currencies of soft power are values, policies and institutions, which have the ability to influence third actors to co-opt and adapt. In the case of the EU, it projects itself on the world scene as a value-driven international actor, which promotes general principles of political order and universally-accepted human rights. Thus, normative power is a form of ideological power (ide é force) shaping conceptions of normal in international relations. These principles of political order that the EU promotes overlap with and are generally acknowledged within the UN system to be universally acceptable and to which global leaders have made a commitment by signing the Millennium Declaration (A/55/L.2) [24]. Such principles are good governance, sustainable development, environmental protection, promotion of sustainable economic opportunities and promotion of education [21,25–27].

In order to promote its norms internationally, the EU tries to build an image of itself as an altruistic actor [21] with a willingness to disregard Westphalian conventions [26]. We trace this aspect in the EU's development policy and particularly within the discourse between the EU and Sub-Saharan African countries, where the same notions are invoked. It is stated in the European Strategy for Africa that "Europe has a strong interest in a peaceful, prosperous and democratic Africa. Our strategy is intended to help Africa achieve this" [28]. The EU's primary legislation towards third parties and the developing world emanate from the Treaty of Lisbon and the European Consensus on Development. The Union's objectives as found in Article 2(5) of the Treaty of Lisbon are:

In its relations with the wider world, the Union shall uphold and promote its values and interests and contribute to the protection of its citizens. It shall contribute to peace, security, the sustainable development of the Earth, solidarity and mutual respect among peoples, free and fair trade, eradication of poverty and the protection of human rights, in particular the rights of the child, as well as to the strict observance and the development of international law, including respect for the principles of the United Nations Charter [29].

Similarly, Article 10A(1) of the Treaty of Lisbon stipulates:

The Union's action on the international scene shall be guided by the principles which have inspired its own creation, development and enlargement, and which it seeks to advance in the wider world: democracy, the rule of law, the universality and indivisibility of human rights and fundamental freedoms, respect for human dignity, the principles of equality and

solidarity, and respect for the principles of the United Nations Charter and international law [29].

The EU has consciously formed its development objectives around the Millennium Development Goals [30]. Article 1 of the European Consensus on Development (COD) states that:

Combating global poverty is a moral obligation. In such a world, we would not allow 1200 children to die of poverty every hour. Development policy is at the heart of the EU's relations with all developing countries. The Member States and the Community are equally committed to basic principles, fundamental values and the development objectives agreed at the multilateral level [31].

Moreover, concerning the environment, Article 10A, 2(d) of the Lisbon Treaty states that:

The Union shall define and pursue common policies and actions, and shall work for a high degree of cooperation in all fields of international relations, in order to foster the sustainable economic, social and environmental development of developing countries [29].

It is explicitly mentioned in Article 1(7) that "in order to translate these shared values into actions we have identified key objectives to which we assign special significance" [32], some of the most important of which are reducing poverty and the rate of child mortality, as well as improving education and the environment. Good governance is required for the attainment of these objectives, which will finally lead to development [33]. Specifically, in Article 10A, 2(h), it is stated that:

The Union shall define and pursue common policies and actions, and shall work for a high degree of cooperation in all fields of international relations, in order to promote an international system based on stronger multilateral cooperation and good global governance [29].

The treaty suggests that the promotion of good governance can be attained through emphasis on political stability, representation and accountability and on minimum corruption, social partnership and transparency. The General Assembly of the United Nations adopted the Millennium Declaration Article 1(2), stating that the developed world has:

A collective responsibility to uphold the principles of human dignity, equality and equity at the global level. As leaders we have a duty therefore to all the world's people, especially the most vulnerable and, in particular, the children of the world, to whom the future belongs [32].

Articles 2(5), 10A(1) of the Treaty of Lisbon and Article 1 of the European Consensus on Development, as well as the Millennium Declaration objectives that the EU espouses illustrate the values and principles that the EU pursues and promotes in its external relations with third parties and, particularly, in its relations with the developing world. These normatively-charged articles set certain standards of conduct and dictate the EU's identity when deploying its foreign policy. The EU seeks to promote its normative constitutive principles beyond its borders through its development and foreign policy. It also exerts its international leadership as a normative power by solving international problems and spreading universal values, such as peace and human rights [34].

2.3. Motivations for EU's Development Aid toward African, Caribbean and Pacific States

Prior to the existing institutional arrangements that govern the contemporary relations between the European Union and Africa (*i.e.*, Yaound & Lome, Cotonou agreements, *etc.*), there were longstanding historical ties that date far beyond the origins of the EU itself due to European colonialism. Throughout decolonization, the Yaound & Convention of the 1960s and the successor Lom & & & agreements, the European member states sought to retain the economic links, the access to natural resources and raw materials and other strategic economic interests they had enjoyed under colonialism [35], and the limited concessions made to the ACP states have been progressively removed ever since, which contradicts the attempts made by the EU to dismiss the significance of the legacies of colonialism [36].

Nevertheless, Africa does not fall under the EU's foreign policy spectrum only due to the colonial legacy. Security and power maximization concerns are not the only drivers of the EU when regarded as a global actor. The EU, as well as any other state, pursues a range of ethical concerns reflecting their distinct political values—from protecting the environment to international human rights. These values, however, can be "secondary" concerns, classified not as significant as security and other collective interests, and when required, the EU will compromise on them if they come into conflict with its core strategic interests [37]. Over the last decade, the EU has increasingly come to serve as the institutional repository for the "secondary" concerns of its member states [6]. Member states explicitly see the EU as a "force for good" in the world, committed to furthering shared European political values, such as democracy and human rights. Commitment to an "ethical" foreign policy may lead EU member states to intervene in parts of the world where the great powers have no significant strategic interests, such as parts of Africa [6].

Regarding "self-interest" in the context of the EU, the unique multi-level governance structure of the EU, *i.e.*, a political system with a clear set of institutions, which meets the minimum requirements to constitute a supranational polity, has allowed for the emergence of common European interests. Member states have delegated part of their national sovereignty to the EU, and it is the latter who now has the final say on many decisions in a number of policy areas, including development cooperation and humanitarian aid. National interests have been produced by national polities; equally, a European polity is expected to produce European interests; therefore, common European interests are as much political constructs as the national interests they are expected to supersede [38]. Development cooperation is a shared competence between the EU and the Member States, with EU development policy undertaken as complementary to the policies pursued by the Member States. Within this complementary collective framework, powerful states (United Kingdom, Germany, France) can set the context and establish the rules for other actors [39,40]. Consequently, the EU is not a sovereign actor in its own right, but acts as a vehicle for the collective interests of its Member States [6]. We understand these interests as collective "strategic interests".

In May 2005, the European Union committed to increase the volume of development aid by 0.56 of their collective GNI by 2010 as an additional contribution to mobilize resources for the Millennium Development Goals. The relations between the EU and African, Caribbean and Pacific (ACP) states concerning development co-operation are governed by two common institutions, the ACP-EU Council and the ACP-EU Joint Parliamentary Assembly, which were founded in 2003. These institutional bodies provide a forum for developmental dialogue between the EU and ACP states. EU ODA is arranged and

channelled to the ACP states by Europe-aid. After a series of collective endeavours, it became part of a single institutional framework in 1993 under the Maastricht Treaty [41]. Development aid normally flows from the EU budget; however, aid directed specifically at the ACP exclusively comes from the European Development Fund, which is an intergovernmental body, the main purpose of which is to promote structural intervention and liberalization [22]. Political dialogue is conducted through the Africa-EU Strategic partnership [42].

All development assistance is dictated by the European Consensus on Development, adopted in 2005, and aligns the development framework of the EU with the aims of the Millennium Development Goals of the United Nations. The main priority areas that have been agreed on are as follows: democracy, human rights, support for economic and institutional reforms, human development and HIV/AIDS, governance, environment, rural development, infrastructure, communication, transportation, trade and regional integration [31].

The EU uses its development policy as part of its wider external relations agenda. Sustainable development and poverty eradication have been included amongst the general principles of the EU's external action and were grounded for the first time by the Lisbon Treaty. The Cotonou Agreement combines traditional development methods with new political objectives, such as trade liberalization, prevention of migration and the promotion of security [43].

It is asserted that the EU development policy, after being subjected to certain reforms (Cotonou revisions, European Consensus of Development), would re-orient provisions of aid towards normative development objectives [44]. The discourse that the EU uses to describe itself is one of a normative power, which is intrinsically connected to the structural dimension of foreign policy that the Union has developed based on adherence to human rights, democracy, rule of law, good governance, social and economic development as the routes out of poverty, violence and conflict [45]. This was perceived as a paradigm shift in the focus and direction of EU-ACP relations compared to the former nature of this relationship that cast doubt upon the notion of partnership [35]. However, these evolutions could be more reflective of a changing global context and the EU's own agenda, interests and values than a response to the needs and concerns of the ACP partners [24]. Liberalization, privatization and support for the private sector are shared interests of both the EU and the World Trade Organization and have been promoted intensively [46].

In the post-millennium period, economic, governance and security challenges in Sub-Saharan Africa induced the EU to intensify its commitments to recipients [47]. This became increasingly apparent, and concerns were expressed for utilizing development aid mainly as a tool of foreign policy. After the conclusion of the Lome conventions, which were revised four times from 1975 to 1989, it seemed that they reflected the global changing context of the time and were indeed normative in nature. Specifically, as Keukeleire and MacNaughtan [24] stipulate regarding the EU's development policy priorities, "Lome was conceived on the basis of aid not trade, grants not loans and non-reciprocal preferential market access rather than a normal trade relationship".

However, later on, as each revision took place, it was becoming more and more apparent that the partnership on equal footing was being contested. Disbursement of aid was very slow and was not concomitant to the rapid population growth, which reduced substantially the aid per capita received by each country, while at the same time, new conditionalities were attached, which were expanding to political issues [43]. The post-millennium emphasis on poverty reduction as espoused by the EU was

the primary aim of the development policy following considerable initiatives, such as the Everything But Arms (EBA) agreement and the elements of differentiation that were inserted in the Cotonou agreement [48]. In fact, though, according to a report on the EU's performance on poverty reduction, it was found inadequate, as it remained insufficiently focused on tackling poverty [49].

In the post 9/11 era, the EU, as a multilateral donor, has increased its links to security concerns. Although the European Security Strategy states that security is the first condition of development, it does not refer explicitly to social or human development [33]. Particularly, it adopted a security strategy, which defines four threats to the Union—terrorism, proliferation of weapons of mass destruction (WMD), regional conflicts and state failure. While this strategy's aims are not necessarily incompatible with poverty reduction, fears are expressed in interviews with ACP and NGO representatives that development needs will be subordinated to security priorities [48].

The abundance of natural resources is also intensifying Western and non-Western engagement in Sub-Saharan Africa, which is why the EU has been bolstering its commitments to the regions [47]. Pressure for controlling migration (Article 13 CPA [50]) has also been a criticism for the EU, which earns it the title of fortress Europe, because it is given priority, overriding normative development objectives. Even though the EU calls this a global approach to development, the pressure on immigration control persists [51,52].

We must clarify at this point that the EU's relationship with the ACP states, although based on a colonial past, which does have an effect on the direction of development aid, is by no means a colonial relationship, as the negotiations with recipient states are conducted with equal sovereign states [7,53]. However, the CPA has become more uniform in the approach adopted for other regions, making the bargaining of the EPAs on the basis of economic integration with the EU and liberalization of the ACP states in order to conform to WTO rules.

Democracy promotion is another contested issue, as the relationship between strategic interests and development assistance is bewildering. The EU promotes its constitutive principles of good governance, which are imposed as conditions. However, these measures concerning institutional structural reform can actually result in a different outcome: decentralize and limit the power of recipient states rather than encourage popular participation; which is an approach consistent with trade liberalization and neoliberalism [54,55].

Moreover, Farrell [46] raises the question about the real aim of Economic Partnership Agreements, included in the Cotonou agreement, based on their political dimension. Particularly, doubts can be cast upon the normative promotion of human rights, democracy and the rule of law, as they are so closely associated with the economic liberalization, that their inclusion seems to support objectives of economic liberalization more than any support for democratization [46,56,57]. The "EU development co-operation has been continuously under the pressure of subordination to the EU's Common Foreign and Security Policy and of being linked to other external priorities" [49].

The continuous failure to come to terms at the Doha Development Rounds of the World Trade Organization led the EU to put more emphasis on its trade relations with developing countries, particularly the ACPs. Specifically, the EU has made continuous efforts to include the "Singapore issues within its development-trade relations with the ACPs, but it encountered consistent reluctance against them. A controversial effort as it could 'bereft of all social and developmental content'" [58]. Direct liberalization

is not a one-way road, and the EU does not make it apparent that it has great leverage for influencing World Trade Organization regulations [42].

Furthermore, concerning the effects of the much discussed Common Agricultural Policy (CAP) for which the EU has been criticized due to its adverse effects on many developing countries in Sub-Saharan Africa, the CAP induces high domestic prices, leading developing countries that are included in preferential trade schemes with the EU to benefit from these high prices [59]. However, the real barrier to Sub-Saharan African countries is the highly restrictive Rules of Origins, related to sanitary and phyto-sanitary standards that the EU sets when it imports products [60]. These aspects make it very difficult for ACP farmers and manufacturers to access EU markets. Furthermore, Economic Partnership Agreements carry the danger that competitive EU exporting firms can outcompete local producers in the ACPs, due to unobstructed access to their markets at a very fast pace [61]. Interestingly, the aim of aid is supposed to mitigate these concerns.

2.4. Domestic Factors and EU Aid Policy

ODA motivations can be affected by domestic factors, which attribute realist features to foreign aid; these factors can be political, social or environmental, including immigration, commercial interests and security issues. Important articles discussing the motivations of EU aid policy are by Bowles [62] and Dunne and Mohammed [63]. The discussion on domestic factors of aid-recipient states affecting foreign aid policy is also present in studies on Japan and Australia, e.g., see Gounder [64] and Takamine [65]. For more general texts on the EU's aid policy motivations, see [66–69]. Looking at domestic political values shared amongst EU member states, aid motives combine self-interested and altruistic objectives that affect the allocation of development aid [70,71].

Immigration is an increasingly important point in the agenda for EU policy makers. There is widespread conviction amongst international development policy makers that boosting a country's economic development will end immigration from that state [68]. An example that reflects this statement was the "Spanish Cooperation Master Plan", which was a co-development program between Spain and Morocco that aimed to promote job generation programs, which hoped to guarantee that potential migrants remain in their country of origin [72].

Moreover, the domestic commercial interests of EU member states as accrued from their respective industrial factor endowments are aimed at being sustained through the development and implementation of common policies. A prominent example of this, beyond the preferential trade schemes, is the Common Agricultural Policy, the adverse effects of which on developing countries are being addressed by channelling development aid [73].

Finally, security concerns constitute a crucial factor that affects development aid allocation. European governments and diplomats continuously claim that the lesson learnt from the recent terrorist attacks in Spain, the U.K. and the USA was that the underlying roots of terrorism and international instability lay in economic and political under-development [33]. Therefore, the European Development Fund strongly supports initiatives concerned with conflict mitigation, disarmament, demobilisation and reintegration in aid recipient "fragile states" [28,74].

3. Methods

3.1. Research Question and Hypotheses

In the previous section, we set out the institutional framework by which the allocation of aid is done, the predominant theoretical approaches to development aid and provided a conceptual framework for understanding the normative aspect of the EU's development aid policy, as well as its drivers. It has been alleged in the aid literature that the allocation of foreign aid does not cause the adoption of "good" macroeconomic policies, nor is it affected by them [75–77]. In the same vein, we argue that the EU's strategic interests may be more important than the quality of the policies of the receiving countries, which can contribute to explaining the pattern of foreign aid allocation. The EU's official position towards the developing world, stipulated in Article 2(5) and Article 10A(1) of the Treaty of Lisbon [29], reflects an idealist theoretical explanation; however, as seen in the literature review, the EU's employed aid policies seem to reflect a realist theoretical explanation.

Good governance, environmental protection and tackling child mortality are some of the primary declared objectives of the EU's development aid policy, which is in accordance with the Millennium Declaration. These variables reflect an idealist explanation of aid flows. Firstly, the concept of good governance comprises democratisation, human rights and the rule of law, which are general principles of political order and have become essential elements in the majority of the agreements between the EU and the ACP states. It is upon these principles that the EU's concept of normative power has been built, which is intrinsically connected to the structural dimension of foreign policy that the Union has developed as the routes out of poverty, violence and conflict [45,48]. Secondly, sustainable environmental development is explicitly stated in Article 10A, 2(d) of the Lisbon Treaty [29], in the Consensus on Development, as well as within the Millennium Development Goals agenda, being a top UN priority [31,32]. Thirdly, child mortality is one of the most crucial health concerns and constitutes a cross cutting issue in the Consensus on Development. It is also amongst the UN priorities within the framework of the millennium development goals for improving health and welfare worldwide. Moser *et al.* in a comparative study found that 10%–20% of children in Sub-Saharan Africa die before reaching five years, compared with, for example, 0.7% in England and Wales [78].

Foreign direct investment, trade exports from aid recipient states and natural resources are factors of strategic importance to the EU, which we suspect are being largely taken into account when EU aid policy is shaped, making it highly politicised. These variables would reflect a pragmatic explanation of aid flows. As mentioned, development aid is aimed at global economic integration; the successive conventions between the EU and the ACP states include a series of Preferential Trade Agreements, such as Everything But Arms (EBA) under the Cotonou, which grants them access to the European market. The EU promotes regional economic and market integration by disseminating a neoliberal economic model, which reflects the EU's internal commitment to market building and economic liberalization [79–81]. As Schimmelfennig points out through an instrumentally rational perspective, an international environment that mirrors the EU is likely to be in the interest of the EU and its Member States; it is an environment that they know and know to use to their benefit [82]. Amongst economic interests that are advocated as strong incentives for foreign aid are natural resources and, particularly, oil, to which European Member States acquire privileged access [83].

Having in mind the above, we generated the following six hypotheses that could shed light on whether the EU's normative rhetoric is consistent with its practices:

H1: Aid flows are positively affected by foreign direct investment flows and fertile business environments; therefore, if aid flows accelerate, then FDI flows and easiness in starting a business accelerate, as well.

- H2: Aid flows are positively affected by the possession of natural resources. The higher the natural resource rents available in recipient states are, the higher the volume of foreign aid is going to be.
- H3: Trade exports from recipient states are positively affected by provision of aid. If exports from recipient states increase, then aid towards those states is accelerated, as well.
- H4: Even if determinants of good governance in the recipient states are strong, aid flows are not affected. Good governance is required for enhancing aid flows. Estimates indicating the status of good governance positively affect aid acceleration. Therefore, if political stability, rule of law, participation and human rights are strong in the recipient states' domestic environment, then aid flows increase as a reward for democratization.
- H5: Aid flows are not positively affected by CO₂ emissions. Aid does not accelerate when CO₂ emissions increase.
- H6: The child mortality rate is not positively affected by aid. If the mortality rate increases, development aid does not.
- H7: If military expenditure is going to increase, then aid provision will increase, as well. Normative power expects military expenditure not to be associated with the provision of aid.

3.2. Population

The population of our study consists of all 48 Sub-Saharan African state signatories of the Cotonou Partnership Agreement (CPA) with the EU. Our population represents all five regions of Sub-Saharan Africa: West Africa, Central Africa, Eastern and Southern Africa (ESA), the East African Community (EAC) and the Southern Africa Development Community (SADC) (Figure 1). This is a longitudinal research study, since it is repeated with the same sample over time with the purpose of identifying and measuring change in the dependent variable "aid flows".



(a) West Africa



(b) Southern African Development Community (SADC)

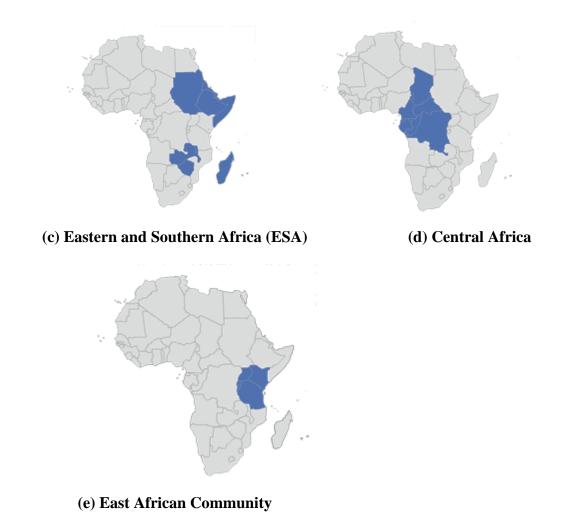


Figure 1. African regions.

3.3. Study Design and Analysis

We employ a positivist approach to the scientific inquiry set. We assume that the social world is subject to the same laws as the natural world; consequently, laws of social behaviour can be found in international relations. Since we are trying to test the predominant explanatory theories that describe the role of the European Union as an international development actor, quantitative methods are strongly recommended for validating already existing theories about how and why phenomena occur. Secondly, the researcher is able to create a situation where the conflating influence of many variables is significantly decreased, while at the same time, the research results can be relatively independent from the researcher [84,85].

We use the data on bilateral aid flows reported by the Organisation for Economic Co-operation and Development (OECD) through the Query Wizard for International Development Statistics (QWIDS). The selection criteria for retrieving official development assistance flows were the following: donor(s): multilateral agencies-EU institutions (Commission); recipients: Sub-Saharan African states; type of aid: official development assistance, which has been disbursed; time period: 2000 until 2010. Our objective is to capture the priority given to development objectives and to see whether it is consistent with the normative conduct of the EU or whether it is in practice primarily a means of promoting the EU's self-interest. However, the resulting relationships based on regressions cannot be proven and neither can they

be attributed to a causal mechanism [86]. Although the variables chosen have been selected based on what the existing empirical literature indicates, we cannot guarantee that all relevant variables have been included in the study. The following variables were chosen to be included in the final model [87]:

- Political stability (PolStab): This variable is the "Political Stability and Absence of Violence/Terrorism" index [88]. It captures perceptions of the likelihood that the government will be destabilized or overthrown by unconstitutional or violent means, including politically-motivated violence and terrorism. The estimate gives the country's score on the aggregate indicator, in units of a standard normal distribution, *i.e.*, ranging from –2.5 (weak) to 2.5 (strong governance performance).
- Carbon dioxide emissions (CO₂em): We use the weighted average of the CO₂ emissions (kg per 2000 US\$ of GDP) index, which represents the carbon dioxide emissions stemming from the burning of fossil fuels and the manufacturing of cement. They include carbon dioxide produced during consumption of solid, liquid and gas fuels and gas flaring.
- Mortality rate of children under five years old (Mortality): Child mortality is claimed to be one of the most crucial of the EU and UN priorities within the framework of the Millennium Development Goals for improving health and welfare worldwide [78]. We use the weighted average of the mortality rate, under-5 (per 1000) index, which shows the probability per 1000 that a newborn baby will die before reaching age five, if subject to current age-specific mortality rates.
- Foreign direct investment (FDI): FDI entails entrepreneurial issues of ownership and control over enterprises within foreign business environments. The OECD defines FDI as a private investment made for the purposes of acquiring a "lasting interest in an enterprise". This implies "a long term relationship where the direct investor has a significant influence on the management of the enterprise reflected by ownership of at least 10% of the shares, or equivalent voting power or other means of control". We selected the net outflows of FDI as a percentage of GDP. FDI is the net inflows of investment to acquire a lasting management interest in an enterprise operating in an economy other than that of the investor. It is the sum of equity capital, reinvestment of earnings, other long-term capital and short-term capital, as shown in the balance of payments.
- Trade export volume (TrExpVol): The trade export volume index shows the volume of total products exported from Sub-Saharan-African states.
- Military expenditure (MilExp): Realists consider military force the most important power capability. Military expenditures as a percentage of GDP include all current and capital expenditures on the armed forces, including peacekeeping forces, defence ministries and other government agencies engaged in defence projects, paramilitary forces, if these are judged to be trained and equipped for military operations, and military space activities. Such expenditures include military and civil personnel, including retirement pensions of military personnel and social services for personnel, operation and maintenance, procurement and military research and development.
- Natural resource rents (NatResRent): The total natural resource rents as a percentage of GDP is the weighted average of the sum of oil rents, natural gas rents, coal rents (hard and soft), mineral rents and forest rents.

We use a least squares dummy variable model regression to examine the aid flows (dependent variable) to all 48 Sub-Saharan African states from 2000 to 2010. A more detailed explanation of the statistical analysis is given in Appendix A. The flow data are official development aid disbursed on an annual basis from donor (EU commission) to recipient states (Sub-Saharan Africa). We chose independent and control variables based on indexes that reflect social development and potential material incentives: political stability, child mortality, CO₂ emissions, foreign direct investment, trade exports, military expenditure, ease of starting a business and possession of natural resources.

4. Results

4.1. Descriptive Results

We computed means and standard deviations (SD) for all variables (Appendix B). Figures 2 and 3 depict trends in the volume of aid from the EU commission towards Sub-Saharan African recipient states and changes in good governance. In regard to the 2005 commitments of the EU for increasing development aid, we observe that upward aid flow trends from 2000 to 2010 are infinitesimal and remain steady in all regions of Sub-Saharan Africa, except for the Democratic Republic of Congo, and several East African states, where aid flows accelerate considerably after 2005, especially in Ethiopia, DR Congo and Tanzania. The dataset comprises aid flows to all 48 Sub-Saharan African countries for a period of 10 years; therefore, a small fraction of the sample could account for potential skewness. However, as depicted in the graphs, this does not necessarily affect the overall descriptive results, as the results are consistent throughout the vast majority of the sample. At first glance, it seems sensible that these countries attract so much foreign aid for being some of the poorest countries in the world having severe deficiencies in basic public and social structures. However, except for Tanzania and Rwanda, which have attained relative political stability and have good potentials at reaching several Millennium Development Goals, the rest are classified as fragile states. Sudan had been involved in a devastating civil war for the past two decades, and its current engagement in the Darfur region causes severe internal instability. Ethiopia ranks very low on the Human Development index, and its geopolitical position in the Horn of Africa is considered highly strategic. Additionally, Congo still struggles in the aftermath of conflict and lacks basic infrastructure.

4.2. Correlations

The importance of producing a correlation matrix is two-fold: first, to assess univariate associations and, secondly, to examine the presence of multicollinearity before executing ordinary least squares regression. We run a diagnostic correlation according to which we choose which variables will be eventually included in our model. The correlation of bilateral aid per capita with the initially employed variables is shown in Table 1.

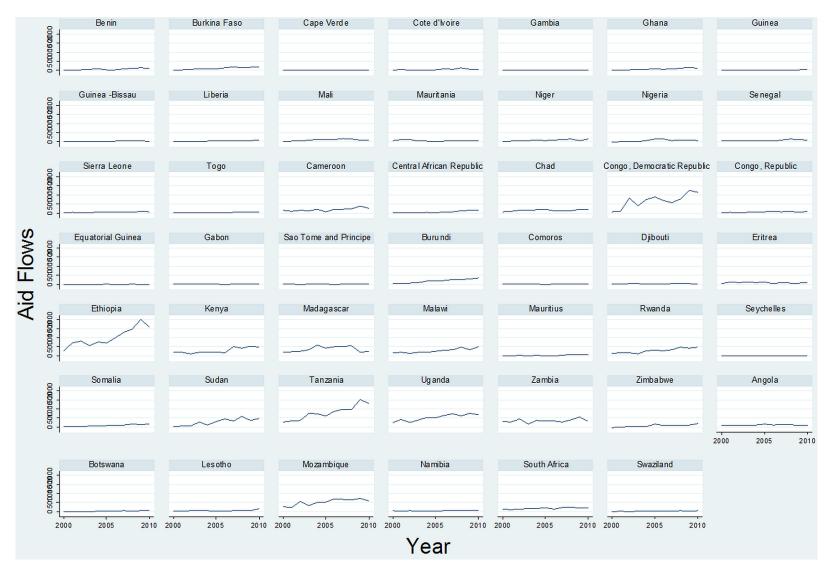


Figure 2. Evolution of the volume of aid towards Sub-Saharan African States, 2000–2010.

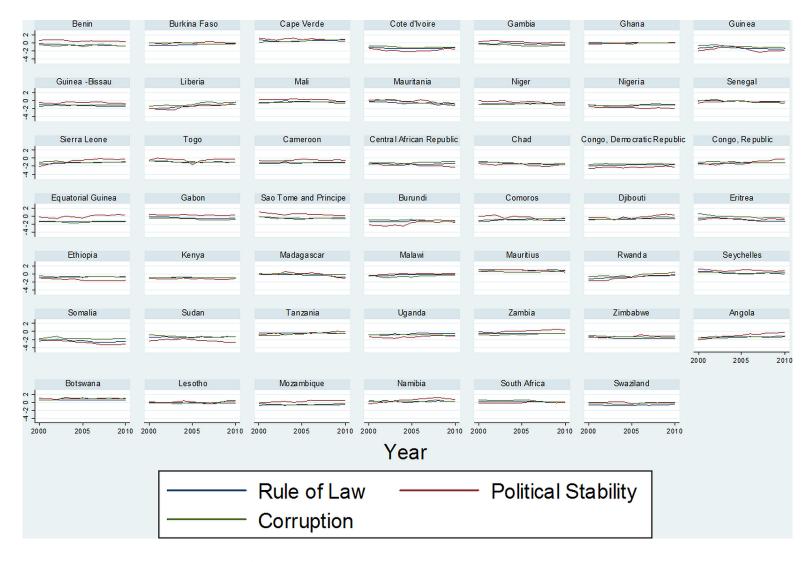


Figure 3. Changes in good governance, 2000–2010.

Table 1. Pearson correlation matrix between variables.

Correlations	Aid flows	Rule of law	Political stability	Corruption	Participation and human rights	Sustainable economic opportunity	CO ₂ emissions	Mortality rate	% Primary education completion	FDI	Procedures to start a business	Trade export volume	Military expenditure
Rule of law	-0.043												
Political stability	-0.222 **	0.803 **											
Corruption	-0.093 *	0.891 **	0.693 **										
Participation and human rights	-0.021	0.830 **	0.690 **	0.746 **									
Sustainable economic opportunity	-0.021	0.943 **	0.795 **	0.862 **	0.902 **								
CO ₂ emissions	-0.036	0.016	0.025	0.097	-0.016	0.074							
Mortality rate	0.062	-0.633 **	-0.510 **	-0.644 **	-0.461 **	-0.674 **	-0.304 **						
% Primary education completion	-0.121 *	0.647 **	0.531 **	0.584 **	0.578 **	0.718 **	0.325 **	-0.772 **					
FDI	0.098 *	-0.022	-0.146 **	-0.021	-0.004	0.022	0.257 **	-0.023	0.161 **				
Procedures to start a business	-0.007	-0.305 **	-0.149 *	-0.330 **	-0.333 **	-0.303 **	-0.025	0.156 **	-0.189 **	-0.109			
Trade export volume	0.076	-0.088	-0.015	-0.114 *	-0.009	-0.094 *	-0.070	0.293 **	-0.264 **	-0.043	0.167 **		
Military expenditure	-0.067	-0.132 *	-0.164 **	-0.007	-0.293 **	-0.229 **	0.196 **	0.035	-0.238 **	-0.086	0.234 **	0.036	
Total natural resources rents	-0.050	-0.419 **	-0.248 **	-0.484 **	-0.450 **	-0.442 **	0.092	0.233 **	-0.186 **	0.208 **	0.237 **	0.118 **	0.029

Notes: ** Correlation is significant at the 0.01 level (two-tailed); * Correlation is significant at the 0.05 level (two-tailed).

4.2.1. Correlations with Aid Flows

Aid flows had significant correlations (p < 0.05) with four variables: political stability (-0.222), corruption (-0.093), % primary education completion (-0.121) and FDI (0.098). Political stability had a moderate negative association with aid flows, indicating that when political stability rises, aid flows decrease; the case was similar with corruption, but the correlation is fairly weak. Nevertheless, political stability had a weak negative association with aid flows, indicating that when the education level rose, aid flows decreased.

4.2.2. Other Correlations

We observed that the rule of law is significantly highly correlated with political stability, corruption, participation and human rights and poverty. This indicates that in the further regression analyses, we will only include one of these, to avoid multicollinearity. We chose political stability, as it encompasses all other concepts in its majority. Mortality is strongly and negatively correlated with good governance indicators, while, on the other hand, primary education produced strongly positive correlations. Moreover, CO₂ emissions are negatively correlated with aid, while positively correlated with good governance. FDI and trade exports are positively correlated with aid, CO₂ emissions and procedures to start a business. Sensibly, procedures to start a business are negatively correlated with aid, good governance and sustainable economic opportunity. The concepts of good governance, the environment, as well as material incentives are crucial determinants of aid according to the literature; therefore, we include political stability, CO₂ emissions and natural resources in our model.

4.3. OLS Regression Models

4.3.1. Overall Model

The overall dummy variable multiple regression model with seven predictors (Table 2) produced a significant model ($R^2 = 0.86$, F (49, 229) = 29.90 and p < 0.001), meaning that our model has strong explanatory power, as 86% of the variance in the dependent variable is explained and is significant. Normative power expects aid flows to have a negative relationship with military expenditure and natural resources and a positive relationship with political stability, the child mortality rate and CO_2 emissions. When excluding the Democratic Republic of Congo and Ethiopia from the analysis, because they exhibit a more upward trend in aid flows compared to the other countries, the R^2 increases slightly to 88.1%, and the Bayesian information criterion decreases by 203 (see Raftery [89] for interpretations of this). This supports strong evidence for the second model; however, our initial aim is to examine all African countries in the model [90].

Table 2. Overall regression results. Dependent variable: aid flows. PolStab, political stability; CO₂em, CO₂ emissions; TrExpVol, trade export volume; MilExp, military expenditure; NatResRent, natural resource rent.

Variable	Coefficient	95% CI ^a	<i>p</i> -value
Intercept	544.678	378.486–710.870	< 0.0001
PolStab	-22.872	-64.050-180.306	0.275
CO ₂ em	58.274	-86.773-2030.321	0.429
Mortality	-5.068	-6.326-(-30.810)	< 0.0001
FDI	0.000	0.000 – 0.000	0.135
TrExpVol	0.184	0.063-0.305	0.003
MilExp	-9.781	-20.017-0.456	0.061
NatResRent	-0.852	-3.227-10.523	0.480
Country			
Benin	157.533	40.990-2740.075	0.008
Burkina Faso	472.408	311.373-6330.444	< 0.0001
Cape Verde	-329.923	-458.229-(-2010.616)	< 0.0001
Cote D'Ivoire	130.033	-4.928-2640.994	0.059
Gambia	19.434	-105.880-1440.748	0.760
Ghana	-67.213	-168.658-340.231	0.193
Guinea	288.772	146.129-4310.416	< 0.0001
Guinea-Bissau	321.530	173.031-4700.029	< 0.0001
Liberia	92.939	-25.156-2110.034	0.122
Mali	563.242	384.324-7420.161	< 0.0001
Mauritania	83.635	-32.236-1990.506	0.156
Niger	461.499	298.004-6240.995	< 0.0001
Nigeria	284.198	111.721-4560.675	0.001
Senegal	-17.844	-118.793-830.106	0.728
Sierra Leone	326.864	139.027-5140.701	0.001
Togo	-8.977	-126.281-1080.327	0.880
Cameroon	322.132	209.996-4340.268	< 0.0001
Central African Republic	299.262	156.538-4410.987	< 0.0001
Chad	442.398	272.222-6120.574	< 0.0001
Democratic Republic of Congo	787.600	630.072-9450.127	< 0.0001
Republic of Congo	10.270	-180.455-2000.995	0.916
Gabon	-79.822	-234.502-740.857	0.310
Burundi	384.085	246.944-5210.226	0.000
Djibouti	-26.868	-127.992-740.257	0.601
Eritrea	147.317	-144.670-4390.304	0.321
Ethiopia	815.083	709.867-9200.299	0.000
Kenya	112.051	8.549-2150.552	0.034
Madagascar	242.132	146.738-3370.526	0.000
Malawi	330.789	233.348-4280.230	0.000
Mauritius	-485.934	-626.523-(-3450.345)	0.000
Rwanda	353.653	241.378–4650.928)	0.000
Seychelles	-523.433	-687.157-(-3590.708)	0.000
Sudan	149.698	21.253-2780.142	0.023

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Variable	Coefficient	95% CI	<i>p</i> -value
Tanzania	619.622	517.498-7210.746	0.000
Uganda	515.714	400.230-6310.198	0.000
Zambia	453.032	333.753-5720.310	0.000
Zimbabwe	-82.626	-336.710-1710.457	0.522
Angola	482.932	285.706-6800.157	0.000
Botswana	-165.111	-269.147-(-610.076)	0.002
Mozambique	737.129	606.944-8670.313	0.000
Namibia	-192.517	-301.588-(-830.447)	0.001
South Africa	-158.311	-464.871-1480.248	0.310
Swaziland	О в		

^a CI: confidence interval; ^b This parameter is set to zero because it is redundant.

The results show that aid flows are significantly, but not positively, affected by the mortality rate (p < 0.0001). For each additional unit increase in mortality rate, there is a corresponding 5.0 unit decrease in the allocation of aid, controlling for all other variables. Substantively, this means that as mortality increases, flows of development aid decrease; therefore, H5 is true. For this inference, we can be 95% confident that the real value of the coefficient we are estimating falls somewhere between -6.326 and -3.810.

The same is true for the trade export volume, where for a one unit increase in trade exports, there is a corresponding increase by 0.18 in channelling development aid, holding all other variables constant (p < 0.05). Substantively construed, as exports from the ACPs increase, so does development aid towards them; consequently, H3 is also true. We can be 95% confident that the real value of the coefficient we are estimating falls somewhere between a 0.063-0.305 confidence interval; hence, we can say with 95% probability of being correct that trade export volume is having some effect on our dependent variable. This implies that the allegations that the EU development policy is market oriented, in an effort to grant access to a variety of products that are not produced in the EU, can be true.

Military expenditure is also statistically significant and counts as a predictor of aid flows. For an additional unit increase in military expenditure, there is a corresponding decrease by 9.8 units in channelling development aid (p < 0.06). Substantively, this means that as military expenditure rises, development aid is negatively affected. We can be 95% confident, as well, that the true underlying value of the coefficient we are estimating is found somewhere between a -20.017 and 0.456 confidence interval; therefore, we can say with 95% probability of being correct that military expenditure is having some effect on our dependent variable; therefore, H7 is falsified.

Political stability, CO₂ emissions, foreign direct investment and natural resources do not enter our system of equations significantly. Although the abovementioned variables were expected to count as predictors of aid accelerations, they turned out statistically insignificant when holding all other variables constant. However, when these regressors are utilized in univariate analyses, the *p*-value produced renders them significant. Nevertheless, the effect of all of the independent variables must be taken into account in order to make valid inferences. However, when running the model while controlling for different regions, interesting significant associations arise.

4.3.2. OLS Regression by Regions

In order to test for variation in aid in different regions, we have run five more regressions (Table 3), taking into account each of the five Sub-Saharan African regions. All five models are statistically significant (p < 0.0001) and have strong explanatory power (R^2 over 70%). What we observe is that when controlling for different regions, a clearer and more specific model is generated, which reveals the associations between aid and the predictors.

Table 3. Regressions by region.

	Coefficients					
Variable	West	Central	Eastern and	East	Southern	
v arrabic	Africa	Africa	Southern	African	Africa	
	Affica	Allica	Africa	Community	Airica	
Intercept	282.482 *	-264.299	833.528 *	423.522	-157.351	
PolStab	15.7452	94.104	-187.926 *	-102.201	-14.829	
CO ₂ em	84.1072	444.728	-43.594	596.147 *	38.069	
Mortality	-2.8562 *	1.672	-7.827 *	-4.825 *	0.217	
FDI	7.300×10^{-9}	3.706×10^{-8}	$1.23 \times 10^{-7} *$	1.03×10^{-7}	$1.259 \times 10^{-8} *$	
TrExpVol	0.081 *	0.283	0.198	1.942*	0.963 *	
MilExp	9.2261	35.645	-13.480 *	-104.309	-7.499	
NatResRent	1.162	-2.199	-12.150	41.807 *	3.177	
Country						
Benin	94.098 *					
Burkina Faso	313.285 *					
Cape Verde	-199.685 *					
Cote D'Ivoire	135.865 *					
Gambia	15.678					
Ghana	-14.598					
Guinea	180.583					
Guinea-Bissau	168.076					
Liberia	73.559					
Mali	340.781					
Mauritania	-1.685					
Niger	301.544					
Nigeria	168.366					
Senegal	10.920					
Sierra Leone	211.227					
Togo	0					
Cameroon		18.410				
Central African Republic		0.093				
Chad		17.894				
Democratic Republic		416 002				
of Congo		416.803				
Republic of Congo		135.513				
Gabon		0				

Table 3. Cont.

	Coefficients				
Variable	West	Central	Central Eastern and		Southern
	Africa	Africa	Southern Africa	Community	Africa
Djibouti			-20.937		
Eritrea			186.773		
Ethiopia			758.528 *		
Madagascar			259.085		
Malawi			11.744 *		
Mauritius			-534.668 *		
Seychelles			-529.142 *		
Sudan			-87.802		
Zambia			760.631 *		
Zimbabwe			0		
Burundi				-172.066	
Kenya				-448.298 *	
Rwanda				55.904	
Tanzania				108.876	
Uganda				0	
Angola					-112.580
Botswana					39.817
Mozambique					315.081 *
Namibia					76.918
South Africa					78.592
Swaziland					0
R-square	0.73	0.78	0.91	0.90	0.95
F	9.813	6.793	29.4	19.5	48.4
p	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001

Note: * p < 0.05.

Good governance is only rewarded in West and Central Africa (although not statistically significant) contrarily to eastern and southern African states, where the relationship with political stability is negative, indicating that aid has little to do with rewarding good policies; consequently, H4 is falsifiable. Furthermore, child mortality is also negatively associated with aid in most regions, except for Southern Africa, where there is an infinitesimal positive association; therefore, H6 is true. Foreign aid responds to FDI, which turns significant when controlling for different regions, verifying H1, meaning that aid is sensitive to economic conditions in the recipient states. Moreover, trade exports remain significantly important in all regions and are positively correlated with aid allocation, giving us more valid grounds to assert that H3 is true. What we observe when different regions are taken into account is that CO₂ emissions are positively associated with aid flows, indicating a normative concern for a sustainable environment; consequently, H5 is falsifiable. However, this concerns only the East African region and particularly Kenya, which is not included in the LDCs. Natural resources are also a significant predictor of foreign aid in East Africa and particularly Kenya, which is a regional hub for trade and finance in the region and attracts high FDI flows and private participation; therefore, H2 is also true.

5. Discussion and Conclusions

The findings accrued suggest that in explaining aid flows, political and strategic considerations are more important than the recipient's policy or political institutions [7]. All of the hypotheses made, except for environmental concerns, have been verified and do support the research question under investigation. Although in the context of the Millennium Development Goals, priority is said to be given to these crosscutting issues of major importance (Consensus on Development, Article 7, 45 [31]), there is a considerable gap between donor rhetoric and actual aid allocation [91].

In the present study, an effort was made to further extend the debate regarding the EU's role in international relations as a normative power, i.e., a force for good. This study is not by any means definitive. On the contrary, one of the aims is to set a contextual framework that can be used by other scholars to explore many more detailed questions about what drives the aid-allocation process. Some of the issues we touched upon have been examined in the existing literature, but because this was done mostly by focusing extensively on specific isolated aid determinants, the analysis has been inadequate, and the aspect we investigated had been unexplored. We have to clarify that the results only represent instances where strategic interests supersede normative motivations for allocating development aid. It is not possible to assert that strategic interests continuously override normative motivations, as strategic and political considerations are not mutually exclusive with normative objectives, and this constitutes a limitation. As strategic interest and "normative" issues are not mutually exclusive and as the instances of realism proven by the set of hypotheses are not comprehensive, one is not able to conclusively show that the EU's motivation is never normative by proving these particular hypotheses true. If anything, the exercise shows only that there are indeed instances where strategic interest can be seen to override normative motivations for granting development aid. However, the present study provides a more complete understanding of the EU's motivations behind the distribution of development aid, which contributes to clarifying many misperceptions.

Using newly collected data from the World Bank, we examined trends in aid allocation from 2000 to 2010 and ran a least squares dummy variable model panel data regression in an effort to unveil the drivers behind EU foreign aid. The findings obtained indicate that there is a statistically significant relationship of EU ODA with strategic regressors, meaning that foreign aid to Sub-Saharan Africa is politicised in certain instances. Particularly, political stability as a result of transparency, accountability and rule of law should be a positive sign for donors for disbursing aid to governments of recipient states that respond to the demands of their citizens. Therefore, aid will be effective and its allocation consistent with the normative paradigm. However, our findings suggest that the trend that better governed countries attract more aid does not necessarily stand, as in the majority of the recipient countries, changes in aid acceleration were infinitesimal, whereas countries classified as fragile states indicated significant accelerations in the volume of aid. We assume that this might be related to security concerns of the EU to prevent imminent adverse consequences, such as increased migration flows to Member States. It might also be attributed to the susceptibility of particular recipient states to bilateral donor aid.

Furthermore, while child mortality is one of the most crucial health concerns and constitutes a cross-cutting issue in the Consensus on Development [78], the Millennium Development Goals reports that no progress has been made in tackling child mortality. Our findings confirm this and suggest that child mortality does not constitute a determinant of foreign aid attraction. Possibly, the reason for this could be due

to priority given by the EU to strategic concerns rather than funding health policy development, which contradicts the normative driving forces of the EU's development policy. Not surprisingly, foreign aid sensitively responds to economic variables. Whereas foreign aid is negatively associated with political stability and child mortality, it is positively correlated with determinants of macro-economic management, which count as predictors of aid acceleration, hence contradicting further the EU's development assistance outcomes.

In conclusion, it would be interesting to further investigate environmental sustainability and economic growth, as it seems that economic development is positively associated with environmental sustainability in Sub-Saharan Africa. Nevertheless, this does not mean that because priority is not given to social development, ODA is necessarily futile. Under the hypotheses made, the EU development aid policies seem to be realistic; a fact that has considerable implications for understanding development aid.

Author Contributions

Georgios K. Bountagkidis designed the study, collected the data and wrote the paper. Konstantinos C. Fragkos and Christos C. Frangos performed the data analysis and wrote the paper.

Abbreviations

ACP: African, Caribbean and Pacific;

CPA: Cotonou Partnership Agreement;

EAC: East African Community;

ESA: Eastern and Southern Africa;

EU: European Union;

FDI: foreign direct investment;

GDP: gross domestic product;

GNI: gross national income;

IMF: International Monetary Fund;

MDG: Millennium Development Goal;

NGO: non-governmental organization;

ODA: official development assistance;

OECD: Organisation for Economic Co-operation and Development;

QWIDS: Query Wizard for International Development Statistics;

SADC: Southern Africa Development Community;

SD: standard deviation;

UK: United Kingdom;

UN: United Nations;

U.S.: United States of America;WTO: World Trade Organization.

Appendix A: Panel Data Analysis

Panel data are a longitudinal dataset in which the behaviour of entities is surveyed periodically across time, and these are useful for studying particular subjects at multiple sites. Panel data allow us to control for variables that we cannot observe or measure, such as differences in enterprise practices across enterprises or factors that change over time, but not across entities (*i.e.*, national legislation, various regulations, international agreements, *etc.*), and these account for individual heterogeneity [92].

There are two techniques for analysing panel data: fixed effects and random effects. Fixed effects models are designed to study the causes of changes within an entity (in our case, country). A time-invariant characteristic cannot cause such a change, because it is constant for each person [93]. Random effects assumes that the variation across entities is random and uncorrelated with the independent variables chosen for the model. In order to decide between fixed effects or random effects, we ran a Hausman test, where the null hypothesis is that the desirable model is random effects, contrary to the alternative, the fixed effects. What it actually does is test if the unique errors are correlated with the regressors, and the null hypothesis is that they are not correlated [94]. The Hausman test results are shown in Table A1. Having run the Hausman diagnostic test and confirmed that the error terms are not correlated, we have chosen the fixed effects model for analysing our data. The significant p-value = 0.0129 indicates that we can run a fixed effects model.

There are three models that can be run with fixed effects: the covariance model, the individual dummy variable model and the least squares dummy variable model. The optimal model for this study is the least squares dummy variable model, because the addition of dummies helps to estimate the pure effect of the independent variables on aid flows. Formally, the unobserved effect is now being treated as the coefficient of the individual-specific dummy variable [95]. The γ Di term represents a fixed effect on the dependent variable Yi for individual i. Having re-formed the model in this way, it is equivalent to using OLS regression:

$$Y_i = \alpha + \beta_i X_{i1} + \ldots + \beta_k X_{k1} + \gamma D_i + \varepsilon_i$$
 A(1)

All calculations were performed with STATA 11.0 and PASW 18.0.

Table A1. Housman test supporting the preference for a fixed effects model.

Variable Coefficients Difference S.E.

Variable	Coefficients		Difference	S.E.
	fixed	random		
PolStab	-20.609	-50.146	29.537	24.184
CO_2em	173.01	-18.68	191.70	142.25
fdi	-3.91×10^{-9}	2.69×10^{-9}	-6.61×10^{-9}	2.82×10^{-9}
TrExpVol	0.201	0.158	0.042	0.049
MilExp	-22.538	-23.458	0.920	7.328
NatResRent	-0.185	-0.208	0.023	2.272
Mortality	-6.288	-0.901	-5.387	1.825
ProcBus	-7.709	-10.664	2.954	3.338

 $b = consistent under H_0$ and H_a ; obtained from Stata command xtreg

 $B = inconsistent under H_a$, efficient under H_0 ; obtained from xtreg

Test: H₀, difference in coefficients not systematic; $\chi^2 = 17.80$, df = 7, p = 0.0129; ProcBus: Number of procedures required to start a business.

Appendix B

Table B1. Mean and standard deviation (SD) for each variables.

Variable	Mean	SD
Aid Flows	163.06	248.81
Rule of Law	-0.7361	0.6656
Political Stability	-0.5475	0.9605
Corruption	-0.6180	0.5937
Participation and Human Rights	47.2345	17.1839
Sustainable Economic Opportunity (Overall)	48.3059	14.3669
CO ₂ Emissions (kg per 2000 US\$ of GDP)	0.5123	0.4878
Mortality Rate	120.4596	45.7662
Percentage of Primary Education Completion	59.7830	22.7393
FDI	4.2539	1.09146
No. of Procedures Required to Start a Business	10.05	3.335
Trade Export Volume	165.7956	171.0897
Military Expenditure (% of GDP)	2.2406	2.8261
Total Natural Resource Rents (% of GDP)	12.0264	17.7715

Table B2. Mean and standard deviation (SD) for aid flows per country.

Country	Mean	SD
Country		
Benin	52.987	41.925
Burkina Faso	108.381	50.782
Cape Verde	16.937	8.998
Cote d'Ivoire	56.966	51.825
Gambia	3.958	3.082
Ghana	67.076	30.024
Guinea	35.330	13.618
Guinea-Bissau	18.920	2.676
Liberia	38.426	13.913
Mali	108.902	54.077
Mauritania	51.557	32.265
Niger	71.580	48.194
Nigeria	69.477	58.281
Senegal	58.585	39.897
Sierra Leone	48.563	25.916
Togo	14.250	16.586
Cameroon	170.520	51.216
Central African Republic	36.234	19.190
Chad	151.665	45.926
Congo, Democratic Republic	499.988	272.774
Congo, Republic	59.781	28.088
Gabon	19.412	11.666
Burundi	156.082	77.983
Djibouti	29.621	8.608

Table B2. Cont.

Country	Mean	SD	
Eritrea	94.050	38.179	
Ethiopia	771.460	312.285	
Kenya	226.902	125.859	
Madagascar	395.292	148.394	
Malawi	229.925	70.881	
Mauritius	14.425	8.5865	
Rwanda	232.497	87.137	
Seychelles	5.857	2.1207	
Sudan	207.773	162.73	
Tanzania	663.528	257.43	
Uganda	477.457	178.84	
Zambia	343.590	36.307	
Zimbabwe	60.138	68.784	
Angola	131.074	19.736	
Botswana	18.848	16.410	
Mozambique	515.667	155.635	
Namibia	45.268	15.927	
South Africa	171.745	35.888	
Swaziland	21.978	9.872	
Total	154.704	206.690	

Conflicts of Interest

The authors declare no conflict of interest.

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