

The Effectiveness of Foreign Aid on Economic Growth and Development since World War II: A Review of Theory and Evidence

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The Effectiveness of Foreign Aid on Economic Growth and Development since World War II: A Review of Theory and Evidence^{*}

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Abstract

This study systematically reviews the aid literature, extending beyond economic growth, to assess whether foreign aid has been beneficial or harmful over the past 60 years. Theories of growth and development recognize that capital constraints in developing countries limit their ability to achieve sustained economic growth and development. Following this, Chenery and Strout (1966) and Bacha (1990) highlight foreign aid's role in bridging saving, foreign exchange, and fiscal gaps in developing countries. Moreover, development theories argue that the primary challenges to economic development in these countries include poor resource management, unequal distribution of growth, weak institutions, limited infrastructure, and overreliance on international organizations. Consequently, this survey found that despite substantial aid flows over the past six decades, the impacts on (i) economic growth, (ii) human development, (iii) inequality, and (iv) poverty in recipient countries have been mixed and puzzling, particularly in regions like Sub-Saharan Africa (SSA), Latin America, Asia, and the Pacific. Some studies suggest that countries receiving 25 to 45 percent of their GDP in aid may suffer negative effects, with an optimal threshold of around 20 percent in the Pacific. Overall, while there is no consensus on aid's impact, strong institutions, governance, and financial development are mediators of aid effectiveness, along with the importance of donor motives.

Keywords: foreign aid, economic growth, human development, poverty, inequality, institutions, governance

1 . Introduction

Since the post-World War II period, various development theories have emerged to explain the factors and processes behind economic development among countries. Questions such as why some nations are wealthier than others, why some countries grow faster, and why high economic growth

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does not always lead to improved welfare for all are raised. These concerns have been a central theme in economic theories for many decades. Thus, to understand the logic of foreign aid, it is important to re-examine why nations differ in terms of growth and development. An early attempt to explain the growth phenomenon began in the 1950s with the neoclassical growth model, followed by endogenous growth theory (Todaro & Smith, 2011). Economic theories suggest that the “scarcity of capital” is the main obstacle to growth and development in underdeveloped countries (Meier & Stiglitz, 2001; Todaro & Smith, 2011). It is argued that capital constraints are linked to low savings rates caused by low income levels and weak investment incentives in these countries, making aid inflows necessary (Chenery & Strout, 1966). The Harrod-Domar growth model suggests that an economy depends on domestic savings and investment for growth. Coupled with the neoclassical growth model by Robert Solow (1956), they assume “constant returns to scale and exogenous technological progress.” According to Solow, countries differ in their growth solely because of differences in “their capital-labor ratios, saving rates, and population growth rates” (as cited in Ros, 2000, p. 2), and only if these factors are equal can conditional long-term convergence occur. However, persistent growth divergence between developed and developing countries led to the development of endogenous growth theory, also known as the ‘new growth theory.’ Pioneered by Paul Romer (1986) and Robert Lucas (1988), this paradigm emphasizes increasing returns to scale and endogenous technological changes. They argue that factors such as research and development (R&D) and human capital drive technological progress and sustain economic growth. As growth theory increasingly focused on long-term growth, a new economic perspective emerged to address concerns about persistent underdevelopment, such as poverty. This marked a significant shift in development economics, championed by pioneers such as Rosenstein-Rodan (1943) and Lewis (1954). Ros explained that for “the pioneers of development theory, underdevelopment appeared to be a situation characterized by a lack of capital—which was consistent with labor receiving lower wages than in developed countries—but also by a low rate of return to capital” (p. 3). While growth theory emphasizes the steady state, development theory focuses on the transition process between steady states. For example, Lewis’s famous “two-sector model” describes a less developed nation as comprising two sectors: a traditional sector with surplus labor and zero marginal productivity and an urban industrial sector with high productivity that gradually absorbs the surplus labor. This is possible “on the assumption that capitalists reinvest all their profits” (as cited in Todaro & Smith, 2011, p. 116).

Moreover, in 1990, according to the United Nations Development Programme’s (UNDP) first Human Development Report (HRD), “what matters is how economic growth is managed and distributed for the benefit of the people” (UNDP, 1990, p. 3). The report highlighted that countries that manage and redistribute their income effectively tend to achieve higher levels of development. Research shows that although some nations receive large amounts of foreign aid and experience

steady economic growth, they remain far from achieving an adequate quality of life. This includes countries in SSA, Central and South America, and Oceania (Acemoglu et al., 2002; Castells-Quintana et al., 2019; Ezako, 2024; Feldman et al., 2016; Moyo, 2009; Oladele Akinbode et al., 2020). Thus, economic growth and development are related but distinct concepts.

Therefore, various waves of research have emerged to examine the impact of foreign aid on different aspects of development, including economic growth, human development, poverty, and inequality. Hansen and Tarp (2000) identified three generations of aid effectiveness studies. The first generation, which spanned the 1960s and the 1970s, focused on the effects of external aid on savings, investment, and ultimately, growth, drawing inspiration from the Harrod-Domar model. These studies posited that foreign aid could influence growth only through the accumulation of physical capital. The second generation shifted its focus to the direct relationship between foreign aid and economic development, often using reduced-form regression models. Whether they followed the Solow growth model or the Harrod-Domar model, the primary channel through which aid was believed to affect growth remained capital accumulation. The third generation of studies made significant advancements in four key areas: (i) the use of panel data; (ii) the incorporation of economic policies, institutions, and climatic factors into regression models, drawing from endogenous growth theory; (iii) addressing the endogeneity of aid and related variables; and (iv) exploring the non-linear relationship between aid and growth. Similarly, studies on the effects of aid on inequality, poverty, and human development emerged between the 1970s and the early 2000s. However, the debate on the effectiveness of aid on these dimensions of development remains uncertain and continues. While some studies observed a significant positive contribution of aid to growth, human development, poverty, and inequality (Akobeng, 2020; Ambassa et al., 2024; Bandyopadhyay et al., 2015; Clemens et al., 2004; Dhahri & Omri, 2020; Hansen & Tarp, 2000, 2001; Kasuga & Morita, 2018; Kaya et al., 2013), others showed a significant positive effect only when certain conditions were present in recipient countries (Ali et al., 2020; Burnside & Dollar, 2000; Chung & Hwang, 2022; Ezako, 2024; Maqbool & Ali, 2021; Maruta & Banerjee, 2024; Sarpong & Bein, 2021). However, others have found a significant undesirable effect on these development outcomes (Alesina & Dollar, 2000; Boone, 1996; Doucouliagos & Paldam, 2009; Herzer & Nunnenkamp, 2012; Oladele Akinbode et al., 2020; Pettersson, 2007; Younsi et al., 2019). Furthermore, some scholars do not observe any significant impact of aid or specific aid types, or even when some conditions, such as good policy, hold (Chauvet et al., 2019; Chong et al., 2009; Dalgaard & Hansen, 2001; Dhahri & Omri, 2020; Hansen & Tarp, 2001; Maqbool & Ali, 2021; Qifa et al., 2023; Williamson, 2008). Overall, the evidence suggests that aid effectiveness depends on institutional capacity, governance, including the political regime, and financial development.

The paper is structured as follows: Section 2 discusses the theory of economic growth and development, focusing on its definition and processes; Section 3 presents the theory of foreign aid; Section 4 presents evidence on the effect of foreign aid flows over the past six decades on economic

growth, followed by human development, poverty, and inequality; and Section 5 concludes and provides directions for future research.

2. Theory of Economic Growth and Development

2.1. What is Economic Growth?

Economic growth, often referred to simply as “growth,” is frequently confused with economic development. In theoretical and empirical studies, the two primary indicators of growth are Gross National Product (GNP) and Gross Domestic Product (GDP). When GNP or GDP is divided by the total population, it yields per capita income or output, which serves as a measure of economic growth (Perkins et al., 2013). In essence, growth occurs when income or output increases. GNP represents the total value of goods and services produced by a country each year, including those generated by its citizens living abroad. In contrast, GDP excludes the value of production by citizens residing outside the country. During the 1950s and 1960s, the notion of “development” was primarily associated with “achieving sustained rates of growth in income per capita” (Todaro & Smith, 2011, p. 14). However, even when many countries meet their growth targets, challenges such as poverty, inequality, and unemployment often remain largely unaddressed. As a result, in the 1970s, economists and policymakers began to shift their focus from merely increasing income per capita to addressing these pressing issues (Perkins et al., 2013). This led to the rise of the concept of “redistribution from growth” in development theories (Todaro & Smith, 2011). According to Perkins et al., economic growth alone is not sufficient for improving the living standards of large populations. Several reasons support this assertion: first, governments may pursue growth for political reasons rather than to enhance the welfare of society; second, the benefits of growth might be redirected toward further growth with little consideration for citizens’ well-being; and third, individuals who are already better off may receive most, if not all, of the benefits. Therefore, economic development extends far beyond just increasing per capita income.

2.2. What is Economic Development?

The concept of economic development (hereinafter referred to as development) is frequently discussed, with several influential contributions drawing significant attention. In 1998, Amartya Sen emphasized that the goal of development is to enhance people’s “capabilities” to live the lives they aspire to achieve. While income is a necessary factor in determining these outcomes, Sen stated that realizing one’s capabilities involves overcoming issues such as “high morbidity and mortality, being adequately nourished, and having at least a basic education” (as cited in Perkins, 2013, p. 39). Feldman et al. (2016) further clarified Sen’s perspective, defining economic development “as the expansion of capacities that contribute to the advancement of society through the realization of

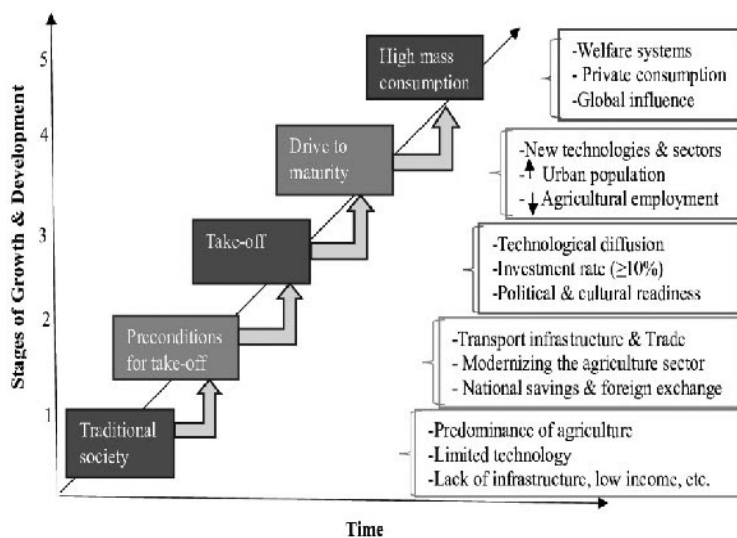
individuals, firms, and communities' potential" (p. 5). Besides poverty, Sen identified four broad sources of capability deprivation that can be addressed through income to help individuals lead fulfilling lives: (i) personal heterogeneities, including illness, disabilities, and age; (ii) environmental differences, such as climate conditions, pollution impacts, and needs for shelter or clothing; (iii) variations in the social environment, including crime, unrest, and violence; and (iv) relative deprivation, which refers to how being poor limits one's ability to fully contribute in community (Perkins et al., 2013). Moreover, economic development is characterized as the process of structural transformation within an economy (Schumpeter, 2017). This encompasses changes in industrial, social, and institutional structures, as well as shifts in education and employment patterns. Various measures of economic development have emerged over time.

The first Human Development Report (HDR) by the UNDP in 1990 introduced a new measure called the Human Development Index (HDI). The HDI is defined as "an index measuring national socio-economic development, based on a combination of measures of education, health, and adjusted real income per capita" (Todaro & Smith, 2011, p. 778). Human development itself is described as "a process of enlarging people's choices. The most critical of these broad choices are to live a long and healthy life, to be educated, and to have access to resources needed for a decent standard of living" (UNDP, 1990, p. 1). Development is also associated with the reduction of poverty and inequality. Economists often focus on specific outcomes such as "income," "consumption," or "wealth" distributions among households to assess inequality (Perkins et al., 2013). The Gini coefficient is the most widely used statistic for measuring income distribution. Perkins et al. point out that the definition of poverty now encompasses more than just income or consumption deprivation; one aspect includes vulnerability to adverse shocks. Nonetheless, absolute poverty can be measured in at least two ways: (1) the "head-count index," which calculates the ratio of individuals below the poverty line to the total population, and (2) the "poverty trap," which assesses how far individuals are below the poverty line. In 2010, the Multidimensional Poverty Index (MPI) was introduced. The MPI considers several indicators of poverty within households across three main dimensions: "health" (nutrition and child mortality), "education" (years of schooling and school attendance), and "standard of living" (cooking fuel, sanitation, drinking water, electricity, housing, and assets) (Alkire et al., 2010). In his book, *The End of Poverty*, Professor Jeffrey Sachs argues that many low-income countries are trapped in a "poverty trap" and need a substantial increase in foreign aid, which he refers to as a "Big Push" from donors (Sachs, 2005).

2.3. The Five Stages of Growth and Development

Regarding the process of growth and development, Walt W. Rostow outlines five stages in his book, *The Stages of Economic Growth*. He describes the path that underdeveloped countries might take to achieve a standard of living comparable to that of developed nations. The five stages are: "the

Figure 1: Rostow's Five Stages of Growth and Development



Source: Author's elaboration

traditional society,” “the preconditions for take-off,” “the take-off,” “the drive to maturity,” and “the age of mass consumption” (Rostow, 1959). This is illustrated in Figure 1.

Todaro and Smith (2011) explain that the least developed and developing countries are in either the traditional or preconditions phase. Transitioning to the take-off stage requires adequate national savings and foreign exchange to finance increased investment. In *traditional society*, Rostow characterizes these economies as having limited production capabilities, primarily due to scarce technological resources. This limitation is evident in trade patterns, agricultural output and productivity, manufacturing scales, limited infrastructure, and real income levels. The *preconditions for take-off* necessitate a significant shift in three non-industrial sectors. First, there must be an expansion of transport infrastructure. This is crucial for developing a viable domestic market and enabling the effective use of natural resources. Second, the agricultural sector needs to be transformed through modern technologies. Third, increasing the import of capital goods, financed by adequate foreign exchange earnings from primary exports, is essential. This includes raising national savings needed to finance investment. The *take-off stage* is characterized by rapid changes in key sectors that are employing modern technologies. This includes sectors such as agricultural processing, transportation systems, and entrepreneurship. A key indicator of take-off is the ability to maintain an annual investment rate of at least 10 percent. The take-off must encompass both economic and non-economic aspects, including political and cultural readiness. During *the drive to maturity*, a period in which a society can effectively apply a variety of new technologies to its production processes. At this stage, new leading sectors will emerge. This period signifies technological maturity, where the changing structure and quality of the workforce, along with

government policies, will shape the leading sectors. This results in a decline in the proportion of the agricultural workforce, an increase in the share of the urban population employed in skilled and semi-skilled jobs. In *the age of high mass consumption*, economies might encounter three scenarios. These involve societies that provide robust security systems and welfare services, promote mass private consumption in housing and durable goods and services, and expand their global influence. For developing countries, transitioning to the takeoff stage requires sufficient national savings and foreign exchange reserves, which require external assistance.

2.4. Harrod-Domar Growth Theory

The Harrod-Domar growth model was the first to describe how savings and investment contribute to growth through capital accumulation (Harrod, 1939). This model suggests that economic growth is dependent on domestic savings and the capital-output ratio. It includes several key assumptions: that there is full employment of resources, no government intervention, a closed economy, and that both the saving rate and the marginal product of capital remain constant. According to Todaro and Smith (2011), the basic model of growth in a closed economy, based on the Harrod-Domar (1950s) framework, is outlined as follows:

- 1 . Net saving (S) as a proportion, s , of national output or income (Y) can be expressed as:

$$S = sY \quad (1)$$

- 2 . Net investment (I) is defined as the change in capital stock, K , and is represented by ΔK such that

$$I = \Delta K \quad (2)$$

Given that the aggregate capital stock, K , has a direct relationship to total national output or income, Y , as expressed by the capital-output ratio, c^1 , it follows that

$$\frac{K}{Y} = c$$

or

$$\frac{\Delta K}{\Delta Y} = c$$

or, finally,

$$\Delta K = c\Delta Y \quad (3)$$

- 3 . Thus, given that net national savings, S , must equal net investment, I , at any given equilibrium, this equality can be written as

$$S = I \quad (4)$$

Nevertheless, following Equation (1) that $S = sY$, and from Equations (2) and (3) that

$$I = \Delta K = c\Delta Y$$

Therefore, it follows that the “identity” of saving equals investment, based on Equation (4), can

1) A ratio that measures the units of capital needed to produce a unit of output over a certain period. The model does not explicitly include the labor force since surplus labor is assumed to exist in developing countries.

be expressed as

$$S = sY = c\Delta Y = \Delta K = I \quad (5)$$

or simply as

$$sY = c\Delta Y \quad (6)$$

By dividing both sides of Equation (6) first by Y and then by c , the following expression can be derived:

$$\frac{\Delta Y}{Y} = \frac{s}{c} \quad (7)$$

Note that the left-hand side of Equation (7), $\frac{\Delta Y}{Y}$, denotes the percentage change or growth rate of GDP. Therefore, Equation (7) illustrates a basic version of the Harrod-Domar theory of economic growth, which states that “the rate of growth of GDP is determined jointly by the net national savings ratio, s , and the national capital-output ratio, c ” (p. 113). The model predicts that without any government interventions, there is greater incentive for an economy to save and invest from a given output, which generates a higher level of growth. Nonetheless, the greater the capital-output ratio, the lower the economic growth, reflecting the inefficiency of capital use. Equation (7) is so often expressed in terms of gross savings, (s^G), whereby the growth rate of GDP is given by

$$\frac{\Delta Y}{Y} = \frac{s^G}{c} - \delta \quad (7')$$

where δ is the capital depreciation rate. The economic rationale for both Equations (7) and (7') is that for economies to grow at a faster rate, they will have to save and invest a greater proportion of their GDP or income. Hence, the rate at which national GDP will grow can be measured by the rate of new investment, $s = I/Y$, times its productivity, I/c .

2.5. The International-Dependence Revolution

This theory has gained greater support among scholars from developing countries, although it was highly disputed by Western counterparts in the 1980s and 90s. There are three main lines of argument under this theory, commonly known as “the neocolonial dependence model, the false-paradigm model, and the dualistic-development thesis” (Todaro & Smith, 2011, p. 122). Concentrating on the neocolonial dependence model, whereby the prevalence of underdevelopment is tied to the international capitalist system that favors rich countries over poor countries. It is believed that the effort by developing countries to become self-reliant and independent seemed unbearable because rich countries are purposely exploitive or unintentionally negligent due to unequal power relationships shared between them. Over time, developing countries are dominated by and dependent on international power groups, including bilateral aid agencies and multilateral organizations such as the World Bank and the International Monetary Fund (IMF). For instance, Griffin and Enos (1970) explain that foreign assistance is provided based on the political support a

donor gains rather than the recipient's need or potential. The false-paradigm model features underdevelopment as the product of uninformed, biased, and misleading models of development from international "experts" and donor organizations. Therefore, this theory rejects that the neoclassical economic theories are designed to eradicate poverty, reduce income inequalities, expand employment opportunities, and raise social well-being for a large population.

3. Theory of Foreign Aid

3.1. What is Foreign Aid?

Foreign aid (hereafter, aid) refers to all resources provided by rich countries, regardless of their intention: political, military, or development objectives. However, debate about aid focused primarily on assistance from richer to poorer countries, whose intention is to improve the welfare and economic development of the latter (Riddell, 2007). The Development Assistance Committee (DAC) of the Organization for Economic Cooperation and Development (OECD) considers aid as provided for development purposes only and excluding those for military or commercial activities. Accordingly, research shows that the common measure of foreign aid is known as the Official Development Assistance (ODA). The notion of ODA was invented by the OECD-DAC in 1969 and is still regarded as the "gold standard" of foreign aid for financing development in developing countries. In its standard definition, ODA flow is:²⁾

- i . "provided by official agencies, including state and local governments, or by their executive agencies; and
- ii . each transaction of which:
 - (a) is administered with the promotion of the economic development and welfare of developing countries as the main objective.
 - (b) is concessional (i.e., grants and soft loans) in character and conveys a grant element of at least 25 percent (calculated at a rate of discount of 10 percent)."

Aid includes financial flows, technical assistance, and commodity aid. The OECD divides aid flows into two main groups: bilateral and multilateral. Bilateral aid is given directly from a donor country to a recipient country, while multilateral aid is distributed through international organizations, such as the World Bank and United Nations (UN) agencies. An OECD-DAC member country (currently 33 nations) is required to allocate 0.7 percent of its Gross National Income (GNI) to aid since the UN resolution of 1970 (Sachs, 2005). Consequently, aid allocations to developing countries often focus on specific sectors and priorities. The OECD categorizes aid into eight broad sectors: (i) Social

2) <https://www.oecd.org/en/topics/sub-issues/oda-eligibility-and-conditions/official-development-assistance-definition-and-coverage.html>

infrastructure and services, (ii) Economic infrastructure and services, (iii) Production sectors, (iv) Multi-Sector/Cross-cutting, (v) Commodity Aid/General Programme Assistance, (vi) Action Relating to Debt, (vii) Humanitarian Aid, and (viii) Unallocated/Unspecified.

3.2. The Two-Gap and Three-Gap Models

Beginning with the foundational work of Chenery and Strout (1966), known as the “two-gap” model, a connection between aid and growth was established by building upon the Harrod-Domar model. Chenery and Strout argued that the lack of skills, savings, and foreign exchange in developing countries hampers their ability to transform their economies. This results in the underutilization of factors of production, including labor and natural resources. They stated, “By relieving these constraints, foreign assistance can make possible fuller use of domestic resources and hence accelerate growth” (p. 680). The two-gap model identifies shortages of domestic savings and foreign exchange as the two primary barriers to achieving higher growth levels in developing countries. The first gap, known as the “saving gap,” occurs when domestic investment opportunities exceed domestic savings, thereby restricting investments. The second gap, referred to as the “foreign exchange gap,” arises when the planned trade deficit exceeds the value of capital inflows, limiting output growth due to insufficient foreign exchange for importing capital goods (Todaro & Smith, 2011). If the saving gap is binding, aid can be utilized to enhance domestic savings and support new investments, such as skill development. Conversely, when the foreign exchange gap is more pressing, external financing can complement domestic resources in developing nations to facilitate new investment projects. For example, surplus labor can be effectively employed in constructing new roads or buildings financed by donor contributions.

Additionally, Bacha (1990) expanded on the two-gap model by introducing the “three-gap model,” which includes the “fiscal gap.” Bacha argued that the fiscal gap constitutes the primary bottleneck to high economic growth in heavily indebted countries, necessitating external finance to alleviate this fiscal constraint. This also entails debt-relief measures as part of the external conditions imposed by donors. Bacha utilized basic mathematical notation to explain the three gaps, as outlined below.

1. *Savings gap*

The basic national accounting identity assumes equality between income and absorption, which is written as

$$I = (Y - C) + (M - X), \quad (1)$$

where I is fixed capital formation, Y is domestic output (GDP), C is consumption (private plus government), M is total imports of goods and non-factor services, and X is total exports of goods and non-factor services. In the balance of payments, the excess of imports over exports is equal to foreign transfers. That is, the difference between net capital inflows, F , and net factor services to

abroad, J :

$$M - X = F - J. \quad (2)$$

Substituting (2) in (1)

$$I = (Y - C) + (F - J). \quad (3)$$

Whenever income is at its potential level, Y^* , and private consumption is exogenously determined, eq. (3) yields the saving-constrained level of investment, which can be denoted as IS , and so the savings-constrained potential growth rate of output, if Incremental Capital Output Ratios (ICORs) are assumed to be constant. In that case, the savings gap is written as

$$IS = (Y^* - C) + (F - J). \quad (4)$$

where “domestic savings” is represented by the first term on the right, and the second term on the right is “foreign transfers” (Bacha, 1990). The second term is beyond the control of the national government (e.g., interest rate variation, which is the main driver of changes in J). Alternatively, shifting the value of J from the second term to the first in the equation (4) leads to

$$IS = (Y^* - J - C) + F. \quad (5)$$

Now, the first term on the right-hand side (RHS) is “national savings” and the second term is “foreign savings.” Furthermore, assume that the government is liable to pay all foreign debt. Consequently, equation (4) leads to a notion of a “primary budget surplus in current account”, a variable that is controlled by the government. Conversely, equation (5) leads to a notion of “government savings”, which the government has no full control over, when interest payments account for a large portion of the budget. To put this into perspective, consumption is divided into private consumption, C_p , and government consumption, G . Also, domestic income, Y , is split into private income, Y_p , and government gross income, T . Then, from equation (3),

$$I = S_p + (T - G) + (F - J), \quad (6)$$

where $S_p = Y_p - C_p$ is private savings.

If all foreign capital inflows help finance the government budget, and all factor service outflows are financed from gross government income, Equation (6) divides the **sources of investment** financing into private savings, S_p , primary budget surplus, $T - G$, and net foreign transfers to the government, $F - J$.³⁾ When all the RHS variables are exogenously given, and Y_p is fixed at the full employment level of income, Y_p^* , Equation (6) yields the “saving gap” as:

$$IS = S_p^* + (T - G) + (F - J), \quad (7)$$

where $S_p^* = Y_p^* - C_p$ is private savings at the potential level of output.

3) Net foreign transfers are an important part of the balance of payments in the current account, which includes foreign aid or remittances.

2. Foreign exchange gap

To set the foreign exchange constraint, assume that imports can be categorized into two forms: complementary capital goods imports, M_k , and other imports, M_o . Let net exports, E , as the difference between exports and other imports:

$$E = X - M_o, \quad (8)$$

and let M_k be equal to:

$$M_k = mI, \quad (9)$$

where $0 < m < 1$ is the import content of investment.

Replacing equations (8) and (9) into (2) and rearranging terms, yields

$$I = (1/m)[E + (F - J)]. \quad (10)$$

In this case, the *foreign exchange-constrained level of investment*, which is denoted as IE , is given by⁴⁾

$$IE = (1/m)[E^* + (F - J)]. \quad (11)$$

Given that $m < 1$, a comparison of the saving gap (7) with the foreign exchange gap (11) yields Chenery's (1966) argument that "foreign transfers have a bigger impact on the growth rate of foreign-exchange-constrained economies than on saving-constrained economies" (as cited in Bacha, 1990, p. 282).

3. Fiscal gap

Bacha (1990) argues that, given the constant issue of a debt crisis, particularly for highly indebted developing countries, government budget constraints explain much of the variations in growth and inflation, rather than the two gaps previously discussed. In a simple formalization of this concept, capital formation is divided between government investment, I_g , and private investment, I_p as:

$$I = I_g + I_p. \quad (12)$$

Applying (12) in (6), the expression for the government budget constraint can be obtained as follows:

$$I_g = (S_p - I_p) + (T - G) + (F - J). \quad (13)$$

Also, assume that private investment relies on government investment, where, at the maximum, its value is

$$I_p = k^* \cdot I_g, \quad k^* > 0. \quad (14)$$

Equation (14) suggests that the central government is playing a key role in developing key infrastructure and industries, which allows more productive private investments to occur. This notion is called the "crowding-in hypothesis" (Bacha, 1990, p. 283). On the other hand, it is argued that the government's dominant power in public investment can lead to high inflation. This means that high inflation, coupled with the fiscal constraint, will harm growth. Moreover, if there is no market for government bonds, monetary expansion will be the only alternative source of financing

4) The assumption is that the level of net exports, E , cannot exceed a critical value, E^* , determined by global demand.

government budget deficits. This means that excess private savings might be available, and the government can only capture this excess savings through “seignorage.”⁵⁾ In that case, seignorage is considered a function of (i) inflation rate, p , and (ii) the propensity to hoard, h .

$$S_p - I_p = dH/P = f(p, h), \quad (15)$$

where dH denotes variation in money holdings and P is the price level.

Thus, replacing (15) in (13), and the outcome in (12), as well as replacing (14) in (12), the “fiscally constrained level of investment” denoted as IT , is given by

$$IT = (1 + k^*)[f(p, h) + (T - G) + (F - J)]. \quad (16)$$

Therefore, at any given point in time, one of the three gaps is binding, necessitating the need for foreign aid.

4. Empirical Literature

4.1. Foreign Aid and Economic Growth

Four main strands of empirical literature can be observed concerning the relationship between aid and growth (Radelet et al., 2005). The *first* strand suggests that, on average, aid positively impacts growth across various countries, but this effect diminishes as aid flows continue to increase, resulting in a non-linear relationship (Bandyopadhyay et al., 2015; Dalgaard & Hansen, 2001; A. K. Dash, 2021; Durberry et al., 1998; Hansen & Tarp, 2000, 2001; Jena & Sethi, 2021; Lensink & White, 1999; Maruta, 2019; Rajan & Subramanian, 2008). The *second* strand posits that aid does not affect growth and may even undermine the growth process. However, some recent studies argue that aid can contribute to growth if it reaches a certain threshold, indicating increasing returns (Abate, 2022; Bauer, 1972; Bauhr et al., 2013; Boone, 1996; Bräutigam & Knack, 2004; Friedman, 1958; Griffin & Enos, 1970; Gyimah-Brempong et al., 2012; Quibria, 2017; Yiew & Lau, 2018). The *third* strand highlights that aid has a conditional association with growth; it can only stimulate growth under certain circumstances specific to the recipient country (Abate, 2022; Bommer et al., 2022; Burnside & Dollar, 2000; Cao & Du, 2024; Dreher et al., 2011, 2019, 2024; Gyimah-Brempong et al., 2012; Hoeffler & Sterck, 2022; Yahyaoui & Bouchoucha, 2020). Finally, the *fourth* strand shows that the effects of aid on growth vary based on timing and the types of aid provided, emphasizing that not all aid is the same (Appiah-Otoo et al., 2022; Clemens et al., 2004, 2012; Haldar & Sethi, 2022; Maruta et al., 2020; Radelet et al., 2005; Rajan & Subramanian, 2008).

5) Bacha further shows that seignorage, which involves printing money, translates into an inflation tax and changes real money holding.

1) Aid has a positive effect on growth on average across countries, but with diminishing returns as aid flows continue to rise.

The existing body of literature suggests that foreign aid can drive economic growth through three main channels. First, aid can supplement domestic savings, enhance financing for investments, and contribute to capital accumulation (Hansen, 2000; 2001). Second, foreign aid can improve labor productivity by investing in education and health. Third, aid may facilitate the transfer of necessary technology, including knowledge from developed countries to developing ones. This transfer can occur through technical assistance or direct technology transfers. A pivotal study by Hansen and Tarp (2000) reexamined the relationships between aid, savings, investment, and growth in 56 developing countries from 1970 to 1993. They concluded that aid has a positive impact on total savings and leads to increased investment, thereby establishing a positive relationship between aid and economic growth. They also confirmed a non-linear relationship, indicating diminishing returns—specifically noting that when the aid-to-GDP ratio exceeds 25 percent, further aid can hinder growth. Similarly, Maruta (2019) found a significant positive impact of aid on financial development in 70 developing countries from 1980 to 2016, using Two-Stage Least Squares (2SLS) and the System Generalized Method of Moments (GMM). In another study, Hansen and Tarp (2001) found evidence of diminishing returns to aid. Their research indicated that aid contributes to growth through investment; however, this positive effect exists even in the absence of good policy environments. Their estimations utilized methods such as Instrumental Variables (IV) and Fixed Effects (FE).

Consistently, Bandyopadhyay et al. (2015) noted that foreign aid's impact on growth tends to have diminishing returns, whereas foreign loans show increasing returns. In Dalgaard and Hansen's (2001) study, they found that aid positively affects economic growth regardless of the policy environment, showing insignificant results regarding foreign aid's impact on growth in countries with good policies. They concluded that the relationship between aid and policy in influencing growth depends significantly on the data and specifications used. Ghura and Hadjimichael (1996) analyzed a sample of 29 SSA countries and discovered that increasing investment positively impacts per capita growth. They suggested that aid flows aimed at increasing investment in human capital, promoting structural reforms, and reducing budget deficits can all contribute to higher growth. Durbarry et al. (1998) examined a sample of 68 least-developed countries (LDCs) from 1970 to 1993 and found that aid flows positively impact economic growth when a stable macroeconomic policy is in place. However, an aid-to-GDP ratio of approximately 40 to 45 percent is very high and may lead to low growth. Diminishing returns to aid can occur at high levels of aid due to recipient countries' capacity constraints in absorbing additional aid inflows. Using the Laffer Curve as a framework, Lensink and White (1999) studied the impact of aid on 138 developing countries from 1975 to 1992. Their findings indicated that countries receiving about 30 percent of GNP could be classified as "high aid" recipients, which may result in greater harm than benefit. Such high levels of aid can lead to institutional

degradation, where governments focus more on managing aid programs instead of prioritizing national development goals. This scenario, where government officials prioritize “pleasing donors” over achieving national objectives, is associated with “donor proliferation” (Morss, 1984). Research has also confirmed the positive effect of aid and the diminishing returns to aid in the Pacific Islands region. Feeny and McGillivray (2008) aimed to determine the optimal level of aid needed for maximum impact on the per capita growth rate of 13 Pacific Island Countries (PICs). They found that when aid constitutes 20.2% of a recipient’s GDP, it reaches the average growth-efficient level. They suggested that once aid reaches its optimal level, it should be directed toward mitigating factors that trigger diminishing returns on growth.

Furthermore, given that climate or green financing is becoming an important component of aid flows, Chen and Singh (2020) studied the effectiveness of foreign assistance in moderating the impacts of natural disasters on the growth of 13 PICs. By employing GMM on the data from 1981 to 2014, they found that while natural disasters hinder growth, aid helps mitigate these adverse effects. Pavlov and Sugden (2006) investigated the aid-growth relationship for seven PICs between 1975 to 2001. They confirmed a positive effect of aid on growth, along with diminishing returns to aid. Jayaraman and Choong (2006) employed the Vector Error Correction Model (VECM) to examine the effectiveness of aid on Fiji’s growth from 1970 to 2002. Consistent with earlier studies, they found that aid positively impacts growth while also exhibiting diminishing returns for Fiji’s economy. Moreover, in their recent study of eight South Asian countries, Jena (2021) and Dash (2021) found that foreign aid significantly affects economic growth in both the short and long run, utilizing Fully Modified Ordinary Least Squares (FMOLS) and Dynamic OLS (DOLS) methods. Yet, numerous studies have found opposing evidence.

2) Aid does not improve growth, and may undermine the growth process

Many studies on this topic find evidence that foreign aid has no significant impact on economic growth in developing countries and may even undermine it. Several reasons contribute to this conclusion: first, aid may primarily be used to finance consumption instead of public investment; second, it can enable corrupt governments to maintain power, thus supporting harmful policies and limiting necessary reforms; third, the effective use of aid can be hindered by a lack of absorptive capacity, which may stem from a shortage of skilled employees or inadequate infrastructure; fourth, aid flows can negatively affect domestic savings; and finally, aid can discourage private sector investment through a phenomenon known as “Dutch disease,” which occurs when aid triggers an appreciation of the local currency (Radelet et al., 2005). Initially, it was believed that all aid flows would be invested rather than consumed, but this perspective shifted after Boone (1996) found that aid does not contribute to long-term growth in developing countries, as it is often consumed rather than invested. Friedman (1958) and Bauer (1972) were among the first to highlight the detrimental effects

of aid on national development. They argued that the political elite could use foreign assistance to maintain power, leading to corruption, discouragement of private sector investment, and consequently low growth. Bauer emphasized that aid harms private sector growth by promoting public sector-led development. In the 1960s, Haavelmo (1965) was the first to note that foreign capital inflows might discourage domestic savings and investment (as cited in Gupta, 1970). Recently, Temsas (2024) observed that aid can crowd out domestic savings in the long run, particularly when recipient countries rely heavily on bilateral donors. Griffin and Enos (1970) identified three behaviors by which aid could diminish domestic savings and growth in their studies of 27 countries. Firstly, recipient governments might change their spending or tax revenue policies; secondly, enterprises might lack incentives to save due to easy access to credit; and thirdly, increased aid flows could largely be used for consumption. Boone supported these assertions, arguing that “aid does not promote economic development for two reasons: poverty is not caused by a capital shortage, and it is not in politicians’ best interest to adjust distortionary policies when they receive aid flows” (p. 322). Friedman contended that aid might “reduce pressure on the government to maintain an environment favorable to private enterprise” (as cited in Brautigam and Knack, 2004, p. 256).

Moreover, some recent studies suggest that the effect of aid on economic growth is negative at lower levels of aid but becomes positive as aid increases to a certain threshold. Abate (2022) examined the relationship between aid inflows and the growth of 48 developing countries from 2006 to 2019 using dynamic panel threshold regression and GMM estimation. The study also explored whether aid is effective in contexts with strong institutional quality and high economic freedom. The results indicated that aid has a negative effect on growth initially, but becomes positive as aid inflows rise to 7.03 % of GNI. Similar findings were reported by Yiew and Lau (2018), who investigated the impact of aid on the economic growth of 95 countries between 2005 and 2013. They also found a non-linear and U-shaped relationship between aid and growth, indicating that foreign aid negatively affects growth initially but later produces positive effects. The authors suggested appropriate legislative measures for the effective management and utilization of aid for countries highly dependent on it. Gyimah-Brempong et al. (2012) studied the relationship between foreign aid and growth in 77 developing countries (from Africa, Asia, the Middle East, Latin America, and the Caribbean) from 1995 to 2004 using GMM. Their results revealed a negative impact of aid on growth at lower levels, but as aid levels reached a threshold between 6.6% and 14.4% of GNI, a positive relationship emerged. They also found a significant positive impact of aid on physical capital accumulation, suggesting that when capital investment is controlled, aid tends to have a positive effect on growth. In contrast, a recent study found no significant impact of aid on growth in the Pacific region from 1970 to 2019 (Gounder et al., 2024). While many studies primarily aim to examine the direct relationship between aid and growth, there are alternative avenues of research that investigate ways in which aid may negatively impact growth. These include: first, *corruption*

(Alesina & Dollar, 2000; Dávid-Barrett & Fazekas, 2020; Economides et al., 2008; Quibria, 2017); second, *aid fungibility* (Devarajan et al., 1999; Devarajan & Swaroop, 1998; McGillivray & Morrissey, 2000; Pack & Pack, 1993); third, *aid volatility* (Agénor & Aizenman, 2010; Dornan & Pryke, 2017; Markandya et al., 2011); and finally, the phenomenon known as *Dutch Disease* (Ahmad et al., 2023; Amin & Murshed, 2018; Godfrey et al., 2002).

(a) *Corruption*

Much of the debate surrounding aid to developing countries is linked to corruption and rent seeking (Economides et al., 2008), whether in Africa (Moyo, 2009) or elsewhere (Quibria, 2017). Quibria discusses how corruption serves as a significant barrier to aid effectiveness in developing countries. Corruption is commonly understood as the “use of public office for private gains” and often manifests in two forms: bureaucratic corruption and political corruption (pp. 10-11). In the case of bureaucratic corruption, government officials frequently accept bribes from contractors and consultants in exchange for project contracts, divert project equipment, and misuse funds. This undermines the overall effectiveness of aid unless necessary reforms are implemented. The author proposes several strategies to enhance aid effectiveness by reducing corruption. First, international partners should ensure strict monitoring of aid funds through control mechanisms, such as procurement rules and financial management reforms. Second, they should improve existing control mechanisms by replacing ineffective or overly costly measures with indigenous practices aligned with the principles of aid effectiveness. Third, donors should allocate funds to strengthen oversight and controls if the recipient government demonstrates a lack of proper management and utilization of aid resources. This includes measures like “outcome-based selectivity,” where countries are rewarded based on actual outcomes achieved rather than merely on promises to utilize funds according to approved corruption control frameworks.

Alesina and Dollar (2000) sought to examine three main areas: first, whether corrupt governments receive a disproportionate amount of aid or debt relief; second, whether donors discriminate against corrupt governments; and third, whether aid promotes or reduces corruption. Using data from 1970 to 1994, they reported that, first, there is no indication that more aid is given to less corrupt governments; this suggests that foreign aid is not particularly sensitive to corruption. Second, they found that corruption is positively associated with aid received from the United States, while Australia and Scandinavian countries tend to provide more aid to less corrupt governments. Third, their results indicate that increased aid contributes to corruption. Dávid-Barrett and Fazekas (2020) assessed the effectiveness of World Bank-financed projects from 1997 to 2014, considering the new procurement rules introduced by the Bank in 2003. They found that these procurement reforms were effective in reducing corruption risks related to low competition; for instance, single-bidder scenarios declined from 22.4% to 18.7% and the percentage of repeat winners fell from 71.8% to 65.4%.

Bauhr et al. (2013) investigated whether donors reduce aid to countries perceived as corrupt through a survey covering 27 EU countries. The results from interviews conducted in donor countries indicate that the perception of corruption in developing countries negatively affects overall donor support. However, this negative effect is lessened by country-specific context and other factors, which they refer to as the “aid-corruption paradox.” This means that the necessity for aid is typically highest in corrupt countries. There are three drivers for increased aid support under this paradox: moral, pragmatic, and strategic reasons.

(b) *Aid Fungibility*

The fungibility of aid has long been a contentious issue in the debate surrounding international assistance. Donors worry that their development aid, intended for social and economic priorities, may be used for unrelated purposes. Concerns about aid fungibility intensified following the well-known World Bank (1998) report on *Assessing Aid*, which highlights public sector behavior regarding aid. Fungibility occurs when the funds allocated by donors are not used for their intended purposes by recipient governments (McGillivray & Morrissey, 2000). This issue can arise when national governments reallocate their spending, for example, diverting funds from one health initiative to another when aid is received to support that particular program. Research indicates that in some developing countries, aid is only partially fungible (Devarajan et al., 1999; McGillivray & Morrissey, 2000) and is not fully fungible across sectors (Clemens et al., 2004). Pettersson (2007) investigated sectoral aid among 57 recipient countries and discovered that, on average, 65 percent of aid flows were utilized for activities outside the intended sectors. Pack and Pack (1993) analyzed five disaggregated aid equations for agriculture, public works, communications, finance, health, education, and social services. They found that aid was more fungible in the Dominican Republic than in Indonesia. The authors attributed this difference to the fact that when foreign aid constitutes a significant source of government revenue, aid fungibility is less likely to happen. In another panel study of 14 developing countries, Feyzioglu et al. (1998) confirmed that aid is fungible in sectors like agriculture, education, and health, while being non-fungible in transportation and communication. The issues surrounding aid fungibility have led to calls for better coordination between donors and aid recipients in key areas: first, establishing mutually agreed-upon development objectives (Devarajan & Swaroop, 1998); second, channeling donor funding through the overall public expenditure programs of recipient countries (Feyzioglu et al., 1998) or reforming public expenditure (Devarajan & Swaroop, 1998); and third, enhancing the monitoring capabilities for aid-funded projects (Pack & Pack, 1993). These proposals have been part of the global agenda on fostering aid effectiveness, such as the 2005 Paris Declaration, focusing on the principles of recipient ownership, alignment, harmonization, results focus, and mutual accountability (Dornan & Pryke, 2017).

(c) *Aid Volatility*

In less developed countries, where aid plays a crucial role in addressing financing gaps, aid volatility is a major concern. This issue is particularly pronounced in small island developing states, which are more vulnerable to external shocks and rely on aid for a substantial portion of their national income (Clarke et al., 2008). Aid volatility adversely affects economic growth, investment, and public expenditure (Hudson & Mosley, 2008). It also significantly impacts countries' "medium-term spending plans" for economic development, such as the Millennium Development Goals (Agénor & Aizenman, 2010). Despite the 2005 Paris Declaration, which calls for donor partners to provide reliable, multi-year commitments and to disburse aid in a timely and predictable manner, aid volatility has increased over the past decade (Dornan & Pryke, 2017). Since 2000, aid volatility has been particularly high in Far East Asia and SSA compared to the Pacific Islands region; however, aid flows from less significant donors in the Pacific tend to be highly unstable. In terms of fiscal policy, local governments may need to raise taxes and cut expenditures as a response to unexpected declines in aid flows. It is acknowledged that aid flows are generally more volatile compared to government revenues, which are negatively associated with economic growth (Eifert & Gelb, 2005; Markandya et al., 2011). The debate continues over whether aid is 'pro-cyclical' or 'counter-cyclical'.⁶⁾ Thus, for a more nuanced analysis of aid volatility, it is more effective to focus on individual sectors rather than aggregate aid.

(d) *Dutch Disease*

Scholars argue that the effectiveness of aid depends not only on fiscal behavior but also on the response of financial markets. A significant issue here is real exchange rate appreciation, which can lead to a decline in the export sector, resulting from high inflows of aid. This phenomenon is referred to as "Dutch Disease."⁷⁾ Historically known as the "resource curse" or the "transfer problem" in the 1950s, Dutch Disease suggests that aid inflows act as an external rent (Doucouliagos & Paldam, 2009). While the transfer of aid does raise the income level of the recipient country, it often results in a decline in the rate of growth, making it more disadvantageous in the long run. Therefore, Dutch Disease is considered one of the main factors contributing to the ineffectiveness of aid over the past 40 years. Dutch Disease can manifest in three ways: first, through the "resource movement effect"; second, through the "spending effect" (Godfrey et al., 2002); and third, through the "liquidity effect" (Neary, 1985, as cited in Ahmad et al., 2023). The *resource movement effect* occurs when the demand for productive inputs rises in a booming sector—in this case, the aid sector—thereby driving other

6) Pro-cyclical refers to a positive correlation between aid inflows and public revenues and growth, while the counter-cyclical resembles that of the opposite direction.

7) The term Dutch disease was given by an economist in 1977 to describe the decline of the manufacturing sector in the Netherlands after the discovery of natural gas.

tradable sectors out of business due to increased prices for these inputs. Next, the *spending effect* happens when a portion of aid inflows is used to finance non-tradable goods, which increases their prices relative to tradable goods and causes real exchange rates to appreciate. Lastly, the *liquidity effect* arises when income increases due to aid flows, leading to higher demand for money, which in turn causes real appreciation of the exchange rate. Using a panel of SSA countries from 1980 to 2017, Ahmad et al. (2023) found that aid inflows contribute to Dutch Disease, although debt repayments can mitigate the effects of aid on real exchange rate appreciation. Conversely, Amin et al. (2018) and Gouy (2011) found no evidence of Dutch Disease in Bangladesh and the Pacific region, respectively. Nevertheless, these recent studies lack robust econometric methods to test the hypothesis. Due to the harmful impact of these factors on growth, this has inspired the third group of studies.

3) *Aid has a conditional connection to growth, meaning it can only generate growth when some conditions hold.*

This third category of literature is referred to as the “conditional” strand (Clemens et al., 2004; Radelet et al., 2005). It includes the perspectives of many leading scholars who seek to address a compelling and unresolved question in the previous aid-growth literature: why is aid more effective in some contexts than in others? The effectiveness of aid depends on the characteristics of either the recipient country or the donor.

(a) *Donor Characteristics*

The motivations of aid donors and the types of donors—whether bilateral or multilateral—are essential factors when examining donor characteristics. During the 1980s, donors frequently employed a strategy known as “conditionality” to address issues related to aid fungibility. Various forms of aid conditionality were adopted, primarily as program aid, which served as “carrots and sticks” for distributing or withholding aid funds (Gibson, 2005). By conditioning aid, donors aimed to encourage recipient governments to align their policies more closely with donors’ intentions (Dreher et al., 2024; Gibson et al., 2005). The imposition of conditions on necessary reforms became a central focus for the IMF and the World Bank. Conditions were primarily focused on addressing macroeconomic problems, trade issues, and low private-sector development as part of structural adjustment programs. However, in the 1990s, these conditions shifted toward governance concerns, including corruption and institutional capacity. A study by Dollar and Svensson (2000) analyzed 220 World Bank adjustment projects and found that the probability of success relies heavily on donor effort. Recent research has focused on the differences among donors to understand why aid from some is more effective than from others. Most scholars agree that donor motives play a significant role in aid effectiveness. Dreher et al. (2024) analyze donor motives based on *recipient needs*, *recipient merit*, and *donor interests*. They conclude that while aid has a moderate effect on economic

development, it is generally more effective in achieving other objectives that donors seek. When donors prioritize their self-interest, aid allocation often reflects their commercial ambitions, trade relationships, geopolitical considerations, and domestic political agendas (Bommer et al., 2022; Dreher et al., 2011, 2019). For instance, when aid is driven by commercial goals, donors expect recipient countries to purchase their exports. Hoeffler and Outram (2011) demonstrated a positive relationship between trade openness and aid for several bilateral donors, indicating that a 1 percent increase in trade is associated with a 0.45 percent increase in aid. This approach can hinder growth. In contrast, when donors are motivated by the needs and merits of the recipients, aid can positively impact economic growth (Hoeffler & Sterck, 2022). Unlike other donors, Japan and the UK tend to allocate more aid to countries with higher democracy scores and fewer human rights abuses (Hoeffler & Outram, 2011). For multilateral organizations, Dreher et al. (2019) show that donor governments can influence the commitment of International Finance Corporations (IFC) loans to support private companies in their countries. As a result, IFC lending primarily benefits companies in wealthy nations. Edo et al. (2022) investigate the effects of multilateral and bilateral aid on the growth of SSA countries from 1980 to 2020, in both short-term and long-term effects. Their findings indicate that multilateral aid has a smaller positive and significant effect on growth compared to bilateral aid. The authors suggest that African economies need strong institutions to enhance the effectiveness of aid.

In their analysis of bilateral donors, Hoeffler and Sterck (2022) examined the differences in China's aid allocation to African countries compared to that of the five largest donors: France, Germany, Japan, the UK, and the USA, from 2000 to 2012. They found that Japan, Germany, the USA, and the UK allocated more aid based on the needs of the recipients, while both France and China directed a significant portion of their aid towards self-interest—France for trade purposes and China for its “One-China policy.” Additionally, France and the UK tended to allocate a substantial share of their aid to their former colonies. The factors influencing donor interests include UN voting patterns and natural resource rents. Table 1 presents some of the variables used in previous studies to measure the motivation behind aid from specific donors. A recent study investigated Japanese aid to 177 partner countries, including those in the Pacific, from 1980 to 2010 (Momita et al., 2019). They found a positive correlation between Japan's aid and economic growth, suggesting that Japanese assistance contributes to industrial development in its partner countries. Dreher and Langlotz (2020) explored the impact of bilateral foreign aid from 28 donors on the economic growth of 97 countries from 1974 to 2013. The 2SLS estimation results indicated a positive but statistically insignificant effect of aid on growth. Further analysis revealed that bilateral aid significantly contributes to investment and private consumption but reduces the trade balance. While Australia allocates more aid to the Pacific region than to any other area, “Australian aid is less likely to succeed in the Pacific than elsewhere” (Wood et al., 2020).

Minoiu and Reddy (2010) investigated the effects of two types of aid: “development aid” and “non-

Table 1: Key Motivations of Foreign Aid from Specific Donors

Recipient need	Recipient merit	Proximity	Donor interest
-GDP per capita	-Polity	-Language	-UN Voting
-Population	-Control of corruption	-Former colony	-UNSC member
-Number of people affected by disasters	-Debt/GDP	-Distance	-Oil dummy
-Life expectancy at birth	-Government effectiveness	-Religion	-Oil rents (% of GDP)
-Education level	-GDP growth rate		-Trade
			-Taiwan recognition

Source: *Authors' compilation*

developmental aid.” They used data from Scandinavian donors across over 100 countries between 1960 and 2000. Their findings indicate that development aid has a significant and positive impact on long-term growth. Development aid is represented by assistance from donor-friendly countries, which include Denmark, Finland, the Netherlands, Norway, and Sweden. This aid is generally less conditioned and primarily targets economic infrastructure, poverty alleviation—such as in agriculture—and social services. Similarly, Alesina and Dollar (2000) observed that aid from Nordic countries (Denmark, Finland, Norway, and Sweden) yields positive results when considering recipient characteristics like income levels and the quality of institutions. In recent years, attention has shifted to emerging donors, particularly China. For example, Wan and Chen (2022) analyzed the impact of China’s foreign aid on the economic growth of 121 countries from 2000 to 2017. They first identified a negative but “U-shaped” relationship between China’s aid and the growth of recipient countries, suggesting a threshold effect driven by growth-focused aid. Secondly, they found that both growth aid (intended for economic and production purposes) and welfare aid display an “inverted U-shaped” relationship with recipients’ economic growth. Finally, the study concluded that China’s growth aid is effective in stimulating growth, influenced by factors such as foreign direct investment (FDI) and international trade. Hence, the recipient country’s characteristics also matter for aid effectiveness.

(b) *Recipient Country Characteristics*

Many prominent studies suggest that the impact of aid on a recipient’s economy depends on several recipient factors, including good policy, institutional quality or governance, absorptive capacity, and environmental conditions. After the Cold War, Dreher et al. (2024) highlighted the increasing importance of institutions and policies among donors. In their research, they view these factors as the merit of the recipient country. This implies that donors may provide more aid to recipients who meet these preconditions. North (1991) describes institutions as “humanly devised constraints that structure political, economic, and social interaction. Throughout history, institutions have been devised by human beings to create order and reduce uncertainty in exchange” (p. 97).

Countries with strong institutions and governance tend to invest more in physical and human

capital as well as appropriate technologies. According to Acemoglu et al. (2003), good institutions share three key characteristics. First, the effective implementation of property rights encourages individuals to invest. Second, impose limitations on the actions of politicians and elites to prevent the misappropriation of funds and investment opportunities, thus reducing societal inequality. Third, provide a degree of equal opportunity for individuals, fostering broader participation in productive activities. Several scholars argue that when conditions for good institutions and policies are present, they can enhance the impact of aid on the growth of developing countries (Burnside & Dollar, 2000; Abate, 2022).

Kofi Annan, the former Secretary-General of the UN, stated that “good governance is perhaps the single most important factor in eradicating poverty and promoting development” (as cited in Graham et al., 2003, p. 1). For instance, weak governance in Africa is a primary reason why aid has not been effective in alleviating poverty and promoting growth (Moyo, 2009). Alongside Bräutigam and Knack (2004), they emphasized that higher levels of aid could weaken governance (e.g., rule of law, accountability, and control of corruption). On the other hand, Burnside and Dollar’s (2000) findings indicated that aid positively impacts economic growth in developing countries that have sound fiscal, monetary, and trade policies. However, their conclusion has faced challenges from several authors. Easterly (2003) critiqued the methodology and argued that the definition of “good policy” should be reconsidered. In a subsequent study, Easterly et al. (2004) reexamined the relationship between aid, policy, and growth using the Burnside and Dollar specifications but with an expanded sample. They concluded that aid does not influence growth even in environments with good policies, suggesting that Burnside and Dollar’s findings are fragile. Similar outcomes were confirmed by Hansen and Tarp (2000).

Recently, Abate (2022) observed that aid, when combined with institutional quality and economic freedom, had a positive impact on growth. Specifically, a minimum institutional quality score of -0.320 was necessary for these countries for aid to effectively stimulate growth. Yahyaoui and Bouchoucha (2020) examined 48 African countries and found a positive relationship between total aid and economic growth when institutional quality was accounted for. Similarly, Gyimah-Brempong et al. (2012) reached the same conclusion in a study of 77 developing countries. In addition, Ofori et al. (2024) discovered that aid contributes to inclusive growth in 41 SSA countries, contingent on the state of transport infrastructure. Conversely, Wako (2018) found that DAC donors are more inclined to provide aid aimed at improving institutions; however, this increased aid has led to a decline in institutional quality in a panel study of 43 SSA countries from 1980 to 2013. In another study, Cao and Du (2024) analyzed the impact of U.S. aid on 128 countries from 2009 to 2019 and found that when factoring in institutional quality, U.S. aid could negatively affect growth, although only the absorptive capacity enhances the positive relationship. More recently, authors criticize aggregate aid studies that only tell half of the story about aid effectiveness.

4) *Not all aid is the same*

The fourth strand of aid-growth studies focuses on different categories of aid, including modalities of aid delivery and sectorial aid. Modalities of aid include “broad instruments of aid, such as Project Aid, Program Aid, and Sector Program Support, and the means of aid refer to whether the aid is delivered in the form of credits, grants, or guarantees” (Gibson et al., 2005, p. 5). Hence, disaggregation is taken as a useful approach to measuring the impacts of aid through various lenses: sectorial aid (Maruta et al., 2020; Rajan & Subramanian, 2008), types of aid with different timing of impacts (Clemens et al., 2004; Radelet et al., 2005), and modalities of aid (Ouattara & Strobl, 2008). Although technical assistance is a form of aid that is hard to identify its success in places like South Korea (Easterly, 2007), Collier (2006) argues that technical assistance in Africa is cost-effective, persuades reform, and has a minor impact on the real exchange rate. Feeny (2005) investigated the impacts of project aid on the growth of Papua New Guinea (PNG) and found a positive and significant effect on growth. Most studies cited the work of Clemens et al. (2004) about *Counting chickens when they hatch*. Consequently, Radelet et al. emphasized that most of the previous works on aid-growth relations can be misleading for two reasons: “substance and timing.” In terms of substance, previous literature mainly focused on total aid and its association with growth; however, not all aid is targeted towards growth. Regarding timing, though most studies use panel data for assessing aid-growth relations over four years on average, not all aid flows can affect growth within that period. They explained that “aid to support education and health, for example, may stimulate growth, but the impact is likely to take decades, not years” (p. 47). Clemens et al. categorize all aid into three sub-categories as shown in Table 2. In terms of their impacts on growth, it is proposed that the first category of aid, which is “Humanitarian Aid” should be expected to have a negative relationship with economic growth, given that a disaster would cause a decline in growth and aid to rise. The second group is aid with “Late impact” which has the capacity to affect growth, “but if so, only indirectly and over a long period of time” or long-term (p. 49). That is because aid that helps to foster better health and education, for example, is going to affect labor productivity over numerous years, but not instantly. The third category is aid with “Early impact.” This group of aid has the potential to affect growth over the four years in standard cross-country regressions. According to the sample of 67 developing countries between 1974 and 2001, Clemens et al. and Radelet et al. found a positive and significant effect of “early impact” aid on growth over four years. The estimated impact of aid on growth is more than double the magnitude found in other studies that only account for total aid. Their result also indicates the diminishing returns to aid using the 2SLS and GMM.

Ouattara and Strobl (2008) investigate the effectiveness of aid through different aid modalities, including project aid, financial program aid, technical assistance grants, and food aid, based on the endogenous growth model. Using a panel of 69 countries over the period 1974 to 2001, they found that project aid has a positive and significant effect on growth with diminishing returns. While the

Table 2: Three Categories of Aid

Humanitarian Aid	“Early-Impact” Aid	“Late-Impact” Aid
Disaster relief	Transport and storage	Government and civil society
Emergency aid	Communications	General environmental
Humanitarian relief	Energy generation and supply	protection
Food aid	Most banking and financial	Women in development
	services	Health
	Business and other services	Education
	Agriculture, forestry, and fishing	Populations policies
	Industry, mineral resources, and	Water supply and sanitation
	mining	Policy and administrative
	Construction	management
	Structural adjustment assistance	Support to NGOs
	Budget support	Other social infrastructure and
	Debt relief	services

Source: Radelet et al. (2005, p. 49)

financial program aid (budget support) indicates a negative effect on growth, the technical assistance and food aid appeared to be statistically insignificant. In a renowned study of 83 countries from 1960 until 2000, Rajan and Subramanian (2008) found that aid has only a little positive effect on economic growth. They categorize aid into two subcategories: (i) aid for social uses (i.e., late impact) and (ii) aid for economic uses (i.e., early impact). However, their results do not reveal any positive or negative impact. Similarly, Maruta et al. (2020) analyze the effect of sectorial aid and institutional quality on the economic growth of 74 developing countries from Africa, Asia, and South America from 1980 to 2016. They found that education, health, and agricultural aid are more effective in the presence of strong institutions. Education aid is more effective in South America, health aid is more effective in Asia, and agricultural aid is more effective in Africa. Another interesting paper by Haldar and Sethi (2022) examines the effectiveness of sectorial aid on growth and structural transformation for 32 SSA economies. The results show that aid for agriculture and social infrastructure and services significantly contributes to growth, but hurts structural transformation. Aid for industry has significant negative effects on growth and structural transformation, and aid for economic infrastructure and services has a positive and significant effect on growth. For 37 African countries from 2002 to 2018, Appiah-Otoo et al. (2022) found that all types of aid (health, agriculture, education, humanitarian, and economic infrastructure and services aid) have a negative and significant effect on growth, except that they are conditioned on financial development (i.e., private sector credit and money supply). The authors argued that this is associated with the deep problems of institutions characterized by corruption and weak economic policies in African countries. Furthermore, some scholars argue based on the so-called *micro-macro paradox*.

(a) *The ‘micro-macro paradox’*

The notion of the *micro-macro paradox* proposed by Mosley (1986) was to distinguish between aid impacts at the micro level and the national output. He argues that though no positive or negative impact can be recognized between aid-funded projects and growth, a lot of positive return is reported in project assessments for recipient countries. Mosely describes three reasons that explain the micro-macro paradox: first, the problem of *inaccurate measurement*; second, the *fungibility of aid* by recipient governments; and third, that aid causes the *backwash effects*, meaning that aid may harm private sector growth. His work was seen as confirmation of some previous works that found no impacts of aid at the macro-level. Later, White (1992) expanded the concept by uncovering two additional prospective drivers: first, the issue of scale analysis, suggesting that research ought to be tailored geographically; second is the difference in the definition of data used: micro studies use socio-economic data, while researchers use financial data for their macro analysis. In the early 2000s, some scholars strongly reacted to this concept (Hansen & Tarp, 2000). Recently, the macro-micro paradox has been found in three SSA countries where aid and growth are correlated, but no evidence that aid contributes to the MPI (Larrú & González, 2022).

4.2. Foreign Aid and Human Development

With the inception of HDI in 1990, it was now regarded as a more representative measure of socio-economic development than income per capita alone. Since then, many scholars have departed from the traditional aid-growth relationship study and examined the impacts of aid on the human development of recipient countries (S. A. Asongu & Nwachukwu, 2018; Chung & Hwang, 2022; D. P. Dash et al., 2023; Ezako, 2024; Nam & Ryu, 2023; Oladele Akinbode et al., 2020; Sarpong & Bein, 2021; Williamson, 2008). In a panel study of 19 developing economies from South and Southeast Asia from 1990 to 2019, Dash et al. found that aid has significant negative effects on human development proxied by HDI. This is due to structural challenges and differences in areas such as infrastructure, political regime, and external debt. Further results indicate that aid positively impacts human development when improved infrastructure and a good political regime, particularly a strong democracy, are present. Likewise, although the SSA region remains the largest aid recipient, scholars have found either no or a negative impact on human development, except when strong institutions exist. Oladele Akinbode et al. found that aid did not affect human development in 47 SSA countries between 2000 and 2016. The interaction of aid and corruption leads to a reduction in HDI. It is proposed that relevant frameworks to reduce corruption must be set to fully reap the benefits of high aid inflows to the SSA region. In another study, Sarpong and Bein examine the effects of aid, governance, and macroeconomic policies on the quality of life, proxied by HDI, for 26 SSA countries from 2000 to 2017. They found a significant negative correlation between aid and the quality of life. Consequently, aid recipients need to utilize donors' money under the condition of strong governance. Ali et al. (2020)

investigate the impact of aid on human development by conditioning on institutional quality for 65 developing countries from 1984 to 2014. The results reveal a negative impact of aid on income per capita and life expectancy, while it is positively related to secondary school enrollment. When conditioning on institutional quality, the impact of aid on all human development indicators is significantly positive. Thus, improving institutional quality will amplify the positive impact that aid is expected to have on human development. Most of these studies address the endogeneity issue using the GMM estimator.

Moreover, Chung and Hwang (2022) examined whether aid improves economic and social development measured by per capita GDP and HDI, respectively. This is based on 42 African countries from 2005 to 2013. The findings demonstrated the weak impact of aid on both outcomes. However, the interaction term between aid per capita and government efficiency is positive and significantly contributes to per capita GDP and HDI. This confirms that aid is effective in countries with good institutions or strong governance. On the other hand, studies have assessed the effect of foreign capital on various indicators of human development in Africa, Asia, and South America (Nam & Ryu, 2023; Reiter & Steensma, 2010). These indicators include HDI, life expectancy, infant mortality rate, literacy rate, and income per capita. These studies confirmed that aid and FDI have a positive impact on human development directly, and when good governance exists. Ezako (2024) uses HDI as a proxy for the sustainable development of 29 low-income countries and 27 middle-income countries between 2005 and 2019. The estimated results show that aid tends to have a significant negative impact on HDI; however, the interaction term between governance and aid constitutes a positive impact. Furthermore, the impact of foreign aid conditioning on the governance level not only enhances human development but also assists in achieving the SDGs, such as SDG 1 “no poverty”, SDG 3 “good health and well-being”, SDG 4 “quality education”, and SDG 8 “decent work and economic growth.” Good governance significantly improved HDI in SSA countries (Sarpong & Bein, 2021).

Still on disaggregate measures of human development, Williamson (2008) examines the effectiveness of health aid on life expectancy, infant mortality, and death rate. From a sample of 208 countries between 1973 and 2004, the author found that health aid is indifferent to general aid, which has no significant effect on human development. The author concluded that foreign aid is not the best tool to eradicate extreme poverty or improve human welfare.

4.3. Foreign Aid and Poverty

Evidence on the nexus between aid and poverty remains unsettled. Notable work began with Sachs (2005), who argues that foreign aid can help the 1.1 billion poor escape the “poverty trap.” Main criticisms come from scholars such as Easterly (2006) and Moyo (2009). Recently, Le Van et al. (2023) introduced two new inputs to the Solow growth model (i.e., a development loan and a fixed cost) to

examine the impacts of aid on economic development and the poverty trap of recipient countries. They find that, in the absence of development aid, a high fixed cost (i.e., electricity, transport, etc.) can create a poverty trap, which is a threshold that is difficult to overcome by an economy if its initial capital stock is relatively low. Hence, aid can help a recipient overcome the poverty trap and converge to a long-term steady-state, but only if a few conditions are met: (i) the recipient possesses a sufficient saving rate, initial capital, institutional quality, and productivity; (ii) “the fixed cost is relatively low”; and (iii) “the loan rule is generous enough” (p. 101). In a poor country, there are two regimes: (R1) the recipient country is highly focused on domestic investment, and (R2) the recipient country is more focused on foreign aid. According to the “non-monotonicity” of capital mobility, the foreign aid that will be made available for R2 countries diminishes as they progress. Consequently, two steady states are present in the R2: the “middle-income trap” and the “poverty trap” (Pham & Pham, 2020).

With high poverty rates and aid inflows, most studies have focused on African countries. Yet, the results are mixed and puzzling. Some authors found promising results about aid effectiveness in reducing poverty, as well as in the presence of strong institutions (Akobeng, 2020; Alao & Alola, 2022; Alvi & Senbeta, 2012; Dhahri & Omri, 2020; Kaya et al., 2013; Mahembe & Odhiambo, 2019). In contrast, others observed that aid rather increases poverty in recipient countries or does not have any significant effects (Anetor et al., 2020; Chong et al., 2009; Dhahri & Omri, 2020; Qifa et al., 2023). Akobeng examines the relationship between foreign aid and democracy on poverty in a panel of 41 SSA countries from 1981 to 2015. The sample data is organized into five-year averages. By following the influential paper of Chong et al., three poverty measures are employed: (1) the poverty headcount index, (2) the poverty gap index, and (3) the squared poverty gap index. They found that aid leads to a decline in poverty; however, various categories of aid have different impacts. Multilateral aid and grants are more effective in reducing poverty than loans and aid from bilateral donors. Further results reveal that civic and political participation enhances the impact of aid in reducing poverty. In another panel study of 79 developing countries from 1981 to 2004, Alvi and Sanbeta observed that multilateral aid and grants largely reduce poverty compared to bilateral aid and loans. Similar results were found by Mahembe and Odhiambo in the case of 44 SSA countries from 1981 to 2013. The author emphasizes that appropriate distributional policies must be in place to ensure that the benefits of growth benefit those in extreme poverty. In addition, by disaggregating aid into agriculture, social infrastructure, investment, and non-investment, Kaya et al. examine their impact on poverty reduction in 46 developing countries from 1980 to 2003. They noted that agricultural aid is more effective in alleviating poverty. The same conclusion was reached by Dhahri and Omri when examining the impacts of aid and FDI on poverty and food security based on 50 countries between 1995 and 2015. The results show that FDI and aid to social infrastructure and non-investment areas have poverty-reduction effects, respectively, while aid for investment and

production sectors is insignificant. Food security is positively associated with aid for social infrastructure, investment, and production sectors. These studies suggest that the composition and channel of aid matter for poverty reduction.

On the other hand, Chong et al. (2009) investigate the effect of aid on poverty and income inequality for over 100 countries from 1971 to 2002, based on cross-country and panel data analysis. The Gini coefficient is used as a measure of inequality. They found that aid does not have a statistically significant effect on inequality and poverty reduction. Similarly, there is no robust evidence when conditioning on institutional quality. The authors argue that although corruption and poor institutions may explain this result, the misallocation of aid to areas that meet the donors' priorities could remain the key factor explaining the poor performance of aid. In another study of 29 SSA countries from 1990 to 2017, Anetor et al. (2020) found that FDI and aid increase poverty, while only trade significantly reduces poverty in the region. This reflects the weak governance that prompts the misappropriation of donor funding. Qifa et al. (2023) distinguish between the short-run and long-run effects of FDI and aid on poverty in a panel of 71 developing countries from 1995 to 2018. Employing various econometric techniques, aid has no significant effect on poverty reduction, while FDI only alleviates poverty in the long run. Furthermore, economic freedom and economic growth have larger poverty-reducing effects. The paper proposes effective allocation of aid to humanitarian and social sectors, such as health and education, instead of those areas that do not foster poverty alleviation. This proposal is consistent with a study by Feeny (2003) about the impact of aid on poverty and human well-being in PNG. The author suggests that, first, donors should target the poorest regions of the country to lessen the prevailing high inequality. Second, since the maturity of the population is employed in the informal sector and lives in rural areas, donor priorities should mainly target agricultural development, from agricultural production techniques to exporting. Third, donor programmes should prioritize water supply and sanitation and the construction of road infrastructure to facilitate access to basic services. On this note, many studies propose the need for appropriate policies to guide donor agencies in undertaking poverty reduction programs, and funding should target the poorer parts of countries rather than being based on the comfort of project implementation (Alao & Alola, 2022; Briggs, 2021).

4.4. Foreign Aid and Inequality

Furthermore, studies on the effects of external aid on income distribution have reached diverse conclusions. In an astounding review of 200 papers arguing for the need for “sustainable and inclusive development”, scholars generally conclude that “foreign aid should not orient developing countries toward industrialization in the perspective of Kuznets but in the view of Piketty” (S. Asongu, 2016, p. 736). This means foreign aid should target inequality more than growth in alleviating poverty. As Kuznets's idea is based on an inverted U-shape between inequality and GDP

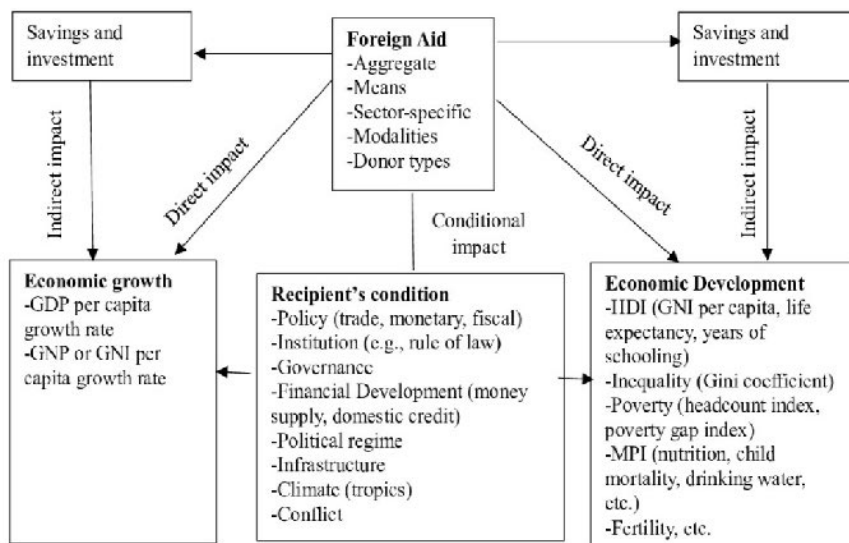
per capita growth, Piketty's (2014) view, based on the U-shape, suggests that aid targeting inequality will effectively lessen poverty, foster governments' capacity for inclusive development, combat corruption, and avoid mismanagement. S. Asongu discussed how Piketty's idea is consistent with the post-2015 development agendas and the role of aid in achieving various socio-economic objectives. Consequently, the findings on the impact of aid on income inequality are mixed, with those that observe a *reducing effect* (Ambassa et al., 2024; Berrittella, 2017; Castells-Quintana et al., 2019; Castells-Quintana & Larrú, 2014; Kasuga & Morita, 2018; Kim & Kim, 2022; Maqbool & Ali, 2021; Maruta & Banerjee, 2024; Tezanos et al., 2013; X. Wang et al., 2024), *increasing effects* (Castells-Quintana et al., 2019; Herzer & Nunnenkamp, 2012; Maqbool & Ali, 2021; R. Wang & Yang, 2025; Younsi et al., 2019), and *no significant effects* (Chauvet et al., 2019; Chong et al., 2009; Maqbool & Ali, 2021).

Numerous studies have found that aid encourages income distribution from the rich to the poor. In a panel study of 41 SSA countries between 1989 and 2022, Ambassa et al. (2024) show that aid lessens inequality, but this effect is diminished in conflict-dominated countries. This suggests the important role of good governance in controlling corruption and avoiding conflict. Given that foreign aid agreements can affect redistribution, Berrittella (2017) noted in his analysis that the stability of these agreements affects "income mobility from the rich to the poorest countries," which in turn reduces global income inequality (p. 105). Kasuga and Morita (2018) analyze the effects of pro-poor aid and inequality in 34 countries from 1996 to 2014. The results reveal that pro-poor aid has an "inequality reducing effect." Also, the interaction between the poverty rate and the pro-poor aid reduces inequality. This suggests that changing the allocation of aid is more important than increasing the amount of aid. While Kim and Kim (2022) find the same result in a panel of 156 countries from 1997 to 2018, democracy may worsen inequality up to a certain threshold. Wang et al. (2024) reveal that aid improves income distribution, particularly the income shares of the lower 80% by reducing the income shares of the highest 20%. Unlike the previous studies, Maqbool and Ali (2021) and Maruta and Banerjee (2024) argue on aid effectiveness based on different categories of aid. Applying the GMM estimator in a panel of 78 countries from 2005 to 2019, Maqbool and Ali observed that aid to the economic sector, the production sector, and the humanitarian response lessens income inequality. Additionally, the interaction term between all types of aid and corruption reduces income inequality in recipient countries. Similarly, from a sample of 65 countries between 1990 and 2017, Maruta and Banerjee observed the inequality-reducing effects of education aid, particularly when institutional quality level and other socioeconomic factors remain above its 75th percentile in the sample. Tezanos et al. (2013) also find that less corruption reinforces the effectiveness of aid. Castells-Quintana et al. (2019) and Castells-Quintana and Larrú (2014) show that the effects of aid on inequality may vary across regions. They observed that aid significantly reduces income inequality in a sample of 18 Latin American countries from 1990 to 2008; however, based on a 2019 paper of 87 countries from 1995 to 2012, aid only reduces income inequality in East Asia and the Pacific.

In contrast, several scholars pointed out the increasing effects or insignificant effects of aid on income inequality. In their long-run analysis of 21 aid recipient countries using FMOLS and DOLS techniques, Herzer and Nunnenkamp (2012) noted a positive effect of aid on income inequality. They proposed the conditionality of aid on institutional quality, results-based aid disbursement, and ensuring country-level ownership of aid programs that target the needs of the poor. Using the GMM estimator, Younsi et al. (2019) analyze the impacts of aid on inequality among 16 African countries from 1990 to 2011. They found that aid, FDI, trade openness, and corruption lead to high income inequality. Government spending and inflation have a negative and significant effect on income inequality. The paper calls for strong institutional quality and financial development that facilitate investment for those with a lower income. In terms of regional analysis, Castells-Quintana et al. (2019) reported that aid contributes to income inequality in Latin America and the Caribbean. Regarding different types of aid, Maqbool and Ali (2021) found that aggregate aid and multi-sector aid encourage more inequality, while social aid has no significant effect. Foreign aid does not affect inequality, as was also noted by Chong et al. (2009). Analyzing China's digital aid in a panel of 127 developing countries from 2000 to 2021, Wang and Yang (2025) find that digital aid channeled through the conventional "ODA-like program" can worsen inequality. Therefore, the debate on aid effectiveness remains unsettled and endures.

In a nutshell, the empirical relationship between aid, growth, and development, as discussed earlier, can be illustrated using Figure 2.

Figure 2: Nexus between Foreign Aid, Growth, and Development



Source: Author's compilation

5. Conclusion

This review presents valuable contributions that enhance our understanding of aid effectiveness, moving beyond the insights offered by comprehensive studies like Doucouliagos and Paldam (2009). It takes a long-term perspective, examining aid effectiveness over 60 years while exploring a broader range of economic development aspects beyond just growth. Additionally, it offers a comprehensive theoretical framework that helps in understanding how aid has evolved and its relationship with growth and development. Economic theories highlight that capital constraints in developing nations can significantly hinder their pursuit of self-sustaining growth, underscoring the critical role of foreign aid in addressing financing gaps. This began with the two-gap model by Chenery and Strout (1966) and the three-gap model by Bacha (1990). For aid to achieve its maximum potential impact, developing countries must prioritize the implementation of sound policies, the strengthening of institutions, and the creation of favorable conditions for private investment.

Development theories argue that in many developing countries, underutilization of abundant resources, which hampers development, is often linked to weak institutional capacity, underdeveloped markets, limited infrastructure, a low-skilled workforce, and overdependence on bilateral and multilateral organizations.

Consequently, despite the considerable flow of aid over several decades, achieving consensus on its effectiveness remains a challenge, largely due to differences in econometric methods, recipient conditions, types of aid, and donor motivations. The review identifies four key findings in aid-growth studies: (i) while aid generally has positive effects, these effects tend to diminish over time, (ii) some aid may yield no impact or even negative consequences in the presence of issues such as corruption, aid fungibility, Dutch disease, and aid volatility, (iii) the impact of aid can be conditional, varying based on donor and recipient characteristics, and (iv) different types of aid can lead to diverse growth outcomes based on their timing and purpose. Moreover, evidence indicates that directing aid toward social infrastructure, agriculture, and non-investment areas is particularly effective in alleviating poverty. Similarly, multilateral aid and grants are effective in achieving this outcome. Furthermore, evidence suggests that aid directed toward economic infrastructure, the production sector, and the education sector significantly reduces income inequality. Overall, studies show that strong institutional quality, governance, and financial development can enhance the positive effects of aid on growth and development.

Looking ahead, future research should focus on: (1) donor motivations, (2) specific donor impacts, (3) effects of specific aid types, (4) short- versus long-term impacts, (5) channels of influence on economic development, (6) aid effects on Dutch disease and fiscal policy, and (7) the micro-macro paradox hypothesis. By addressing these areas, we can enhance our understanding of aid

effectiveness and improve strategies for meaningful development outcomes.

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