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Original Research

Investing in the Future: A Comparative Analysis of Green Technology Investments and Youth Unemployment in the US and South Africa

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Abstract: This study explores the nuanced relationship between sustainable investments, particularly from entities such as the United States (US), and their impact on unemployment trends in South Africa, contributing to discussions on sustainable development goals (SDGs). Utilizing a quantitative approach with data from sources such as the World Bank and Statistics SA, this study employs statistical and econometric methods to assess the socioeconomic consequences of international sustainability funding. The findings indicate a significant link between US sustainable investments and youth unemployment in South Africa, challenging and reinforcing existing research. It depicts that while foreign investments in green initiatives are crucial, they may inadvertently affect local employment negatively. This study recommends policy adjustments in both US and South African legislation to align foreign investments with SDGs, aiming to mitigate youth unemployment. This study underscores the importance of understanding the implications of international funding conditions on local economies, offering insights for policymakers and scholars to develop strategies that leverage sustainable investments for economic growth and employment opportunities. This study provides a fresh perspective on the dynamics between international investments and local unemployment, offering valuable insights for economic planning and policy formulation in South Africa and across other African nations.

Keywords: *Construction Economics, Funding Conditionalities, Green Foreign Policy, International Monetary Fund, Sustainable Development Goals, Sustainable Investment Conditionalities, World Bank, Youth Unemployment*

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Introduction

The Africa Growth and Opportunity Act (AGOA) forum took place from November 2 to 4, 2023, in Johannesburg. Originally delayed due to Pretoria's perceived alignment with Russia over the Ukraine conflict, the event was saved by robust diplomatic efforts. The forum aims to strengthen South Africa's exports to the US, with stakeholders from various sectors attending to discuss enhancing AGOA's impact on Africa. In 2022, South Africa's exports to the US under AGOA totaled R60 billion, predominantly from vehicles, agricultural goods,

and jewelry. Trade Minister Ebrahim Patel expressed intentions to boost export volumes and encourage smaller companies to benefit from AGOA, which was previously excluded from its benefits. South African Trade Minister Ebrahim Patel on October 26, 2023.

Background

Entrepreneurship Combating Youth Unemployment in South Africa

South Africa's youth unemployment crisis is alarming, with nearly 60 percent of young individuals aged between 15 and 24 without jobs (Statistics SA 2022). This rising unemployment intensifies the nation's extant inequality and necessitates an urgent need for high-quality job opportunities. In contrast, many young entrepreneurs in South Africa are pioneering sustainable businesses, as they are open to technological advancement and early adoption of novel technologies, thereby generating jobs and propelling the South African circular economy to a just energy transition (Weaich, Simbanegavi, Ndlovu, Rikhotso, et al. 2023). This entrepreneurial spirit is driven, in part, by green technology investments, which are perceived not merely as an environmental necessity but as an economic growth catalyst (Naidoo and Gasparatos 2018; Weaich et al. 2023).

AGOA's Role

US South Africa Economic Policy and Youth Empowerment

The AGOA forum, which was held in Johannesburg in November 2023, aimed to augment South Africa's exports to the US. In 2022, South Africa's AGOA-aided exports to the US totaled a significant R60 billion, with a focus on vehicles, agricultural produce, and jewelry, none of which considered the global demand for green technology and the Small, Medium, and Micro Enterprises (SMMEs) in the South African market (Weaich, Simbanegavi, Ndlovu, and Root 2023). The aspirations of South Africa's current trade minister, Ebrahim Patel, to amplify export volumes accentuates the potential of such international agreements in bolstering the national economy. Increased youth unemployment rates in South Africa continue to have profound implications for the nation's economic development and social harmony (Bhorat et al. 2014). These high unemployment rates not only deepen social disparities but also result in lost potential human capital that could have fostered sustainable economic progression. Similar concerns echo globally, with countries such as the US grappling with employment disparities, increasing part-time employment, and surging youth unemployment rates (Ayyagari, Demirguc-Kunt, and Maksimovic 2011; Lee et al. 2016). Green technology sectors are rapidly emerging as viable avenues for sustainable economic progression (Naidoo and Gasparatos 2018; Weaich, Ndlovu, et al. 2024).

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Untapped Potential of South Africa's Youth

Owning Green Technology SMMEs

Despite the increased focus on sustainability, the potential of green technologies in mitigating youth unemployment, especially in nations such South Africa, remains inadequately explored (Bhorat et al. 2014; International Labour Office 2015). The global shift toward eco-friendly solutions has amplified the saliency of green technologies for both environmental and economic benefits (Naidoo and Gasparatos 2018; Weaich, Ndlovu, et al. 2023). Small, Medium, and Micro Enterprises (SMMEs) hold paramount importance for economic development in burgeoning economies such as South Africa (Rogerson 2008; Weaich, Simbanegavi, Ndlovu, and Root 2023). Nonetheless, existing literature rarely delves into their potential to achieve environmental equilibrium, sustainable economic growth, and sustainable development practices (Naidoo and Gasparatos 2018; Weaich, Ndlovu, et al. 2023). The pivotal role of SMMEs in job generation and economic diversification is often underestimated (Fatoki 2014; Rogerson 2008).

Bridging Disciplinary Silos

Green Technology's Role in Setting Global Economic Policy

Prior research has primarily operated in silos, focusing on the legal aspects, economic domain, environmental sustainability, or sustainable development (Ayyagari, Demirguc-Kunt, and Maksimovic 2011; Bell and Blanchflower 2011; Chimucheka and Mandipaka 2015; Emmanuel 1974; Fatoki 2014; IPCC 2014; Kobe 2012; Lee et al. 2016; Mol and Spaargaren 2000; Naidoo and Gasparatos 2018; Nill and Kemp 2009; Ockwell et al. 2008; Samoff 1978; Wiek, Withycombe, and Redman 2011; Weaich, Simbanegavi, et al. 2024). The present study bridges this gap by undertaking a comparative analysis of the repercussions of green technology investments provided by the international community, encumbered with conditionalities that have compounding effects on youth unemployment in South Africa. This analysis employs dependency theory (Dos Santos 1996; Frank 2013). This ensures a comprehensive, layered, and insightful understanding of this intricate issue (Lundvall 1992; Mol and Spaargaren 2000). Addressing the dual challenges of youth unemployment and the need for sustainable economic growth requires a multifaceted approach (Weaich, Simbanegavi, et al., 2024). Leveraging green technology investment conditionalities and it is on "one shoe fits all approach" might provide a viable pathway forward, offering a solution for both the environment and the economy (United Nations Environment Programme, Frankfurt School-UNEP Centre, and Bloomberg New Energy Finance 2016).

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Problem Statement

Youth Unemployment and Green Technology Investments in South Africa

Amid alarming high youth unemployment rates in South Africa, green technology sectors governed through sustainable development supply chains offer potential avenues for sustainable economic development, yet their capacity to integrate jobless youth remains underexplored. Although the international transition toward sustainability emphasizes green technologies as solutions for environmental, development, and economic challenges, a comprehensive analysis juxtaposing high youth unemployment and green technology investments and funding through the World Bank and other global financial institutions with conditionalities is lacking. A series of US legislature has been found to negatively impact global stability in achieving the SDGs in peripheral countries. This gap is further magnified by the limited methodological approaches in existing research, which often treat the legal aspects of foreign investments and their conditionalities, economic implications, environmental aspects, and sustainable development separately. Therefore, there is a pressing need for a multidisciplinary study that examines the impact of green technology investments and the conditionalities of foreign investment on youth unemployment in South Africa. The funding provided by the US through institutions like the Word Bank and other global financial institutions with conditionalities, the study will use a theoretical framework for a holistic understanding of this multifaceted issue.

Aim of the Study

Impact of US Investment Conditionalities on SA Youth Unemployment

This study aims to conduct a comparative analysis of the impact of foreign green technology investments and development finance provided by the US and its conditionalities and the impact this has had on youth unemployment in South Africa over the last 17 years, thereby filling a notable gap in the literature. Through the use of theory, this study seeks to provide a multilayered understanding and approach to this multifaceted issue and contribute objective empirical evidence based on epistemological insights that inform policy decisions for sustainable economic development and poverty alleviation in peripheral countries, such as South Africa and other African nations (Babb and Buira 2005; Lundvall 1992; Mol and Spaargaren 2000; Scott 2014; Popper 2008).

Main Research Question (MRQ)

How does green technology investment development finance from the US, channeled through its majority shareholder membership in the World Bank and other global financial institutions, impact youth unemployment in South Africa? To what extent do these conditional investments promote the growth of green SMMEs in peripheral nations, thereby

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fostering economic growth, reducing youth unemployment, and aligning them with the mutually endorsed SDGs?

This study delineates the multifaceted and complex **MRQ** using three interrelated sub-questions. These sub-questions delve into the ramifications of green technology investments from the US on youth unemployment in South Africa. They address the study's objectives (**O1, O2, O3**) and lean on foundational assumptions (**A1, A2, A3**) to elucidate and substantiate the hypotheses (**H1, H2, H3**). The study also draws on a null hypothesis rejection to confirm and corroborate its three hypotheses under theoretical testing and purview (**H0**).

Analyzing the Impact of US Green Tech on South African Youth Unemployment

Sub-questions (SQs)

SQ1: Utilizing inferential statistics combined with a systematic legal analysis, is there a discernible relationship between US green technology investment development finance and the trends in youth unemployment in South Africa?
SQ2: How do foreign investments through green technology investment development finance and its associated funding conditionalities shape the trajectory of youth unemployment in South Africa?
SQ3: How can policy be redefined to sustainably address high youth unemployment, offering actionable recommendations to both core and peripheral countries through a structured guide?

Evaluating US-SA Green Technology Investment Policies on Unemployment

Objectives (O)

O1: To identify policies through a review of the literature for green technology investment development finance that hinder the SDGs of the US and South Africa.
O2: To examine the interconnection between the conditionalities imposed by foreign green technology investment development finance in terms of the fluctuations in youth unemployment in South Africa, clarifying their impact.
O3: To formulate a comprehensive policy guide focused on reducing youth unemployment while concurrently evaluating the alignment of the US and South Africa's policies with the SDGs.

Underpinning US Green Tech Investments' Impact on South African Youth

Assumptions (A)

A1: The secondary data employed in this study are drawn from reputable sources and are inherently reliable.
A2: The conditionalities associated with the US green technology investment development finance have a tangible impact on youth unemployment in South Africa.
A3: The established economic and sociopolitical relations between the US and South Africa provide a meaningful foundation for analytical comparison.

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Hypotheses (H)

H1: A tangible association exists between green technology investment development finance issued from the US and youth unemployment trends in South Africa.
H2: The US directed funds toward specific sustainable investments with a political agenda coincided with heightened youth unemployment rates in South Africa.
H3: With the US promoting green investments via funding mechanisms laden with conditionalities, a consequential surge in youth unemployment in South Africa is observable, which can be demystified through meticulous policy scrutiny.
Null Hypothesis (H_0): US green technology investments do not have a statistically significant impact on the growth of youth unemployment in South Africa, ceteris paribus. (Rejected and Proven False, see Results Section).

Literature Review

Theoretical Literature Review: Dependency Theory

Green Technology Investments and Youth Unemployment in South Africa

Dependency Theory, originating in 1960s Latin America, challenges modernization theories, depicting that external economic influences, particularly from affluent nations, significantly mold the development trajectories of less wealthy countries (Dos Santos 1996; Rostow 1990). Latin American nations, such as African nations, face persistent underdevelopment, despite their interactions with economically robust nations. This phenomenon has led prolific scholars such as Andre Gunder Frank to conclude that global capitalist systems inherently perpetuate underdevelopment in peripheral nations and that this has a negative impact on global sustainability. This framework categorizes nations into dominant "core" and subservient "periphery," with the latter often exporting raw materials and importing finished goods (Frank 2013). Core nations, employing tools ranging from economic colonization through conditional investments, exert economic dominance over peripheral nations (Cardoso and Faletto 1979). This study highlights how such dynamics, epitomized by US sustainable development through green investments and its imposed conditionalities, influence youth unemployment and green SMME growth in South Africa. Such investments, akin to historical economic tools, are mechanisms that powerful nations such as the US employ to influence peripheral countries' developmental trajectories (Samoff 1978). Dependency theory thus provides insights into youth unemployment variations in South Africa, considering the impact of sustainable developments through green technology investments on industry growth and employment sectors (Prebisch 1950).

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The US Influence on Global South Development through Sustainable Projects

The push for sustainable development, a focus of this study, intersects with dependency theory, prompting a critical evaluation of green technologies and green strategies that may inadvertently favor core nations or impose onerous conditions on periphery nations, such as South Africa (Dreher and Jensen 2007; Emmanuel 1974; Gould 2003). Through the lens of dependency theory, the US Congress's use of legislative acts such as the Foreign Operations, Export Financing, and Related Programs Appropriations Act to influence the policies of the World Bank exemplifies core nations exerting control over global financial institutions to dictate the terms and conditions under which peripheral nations access financial resources (Babb and Buira 2005). The case of the Narmada Dam Projects reveals how the US, a core nation, leveraged its dominant position to ensure that projects in peripheral nations, such as India, adhered to standards set by the core (Baviskar 1999; Chaplin 1996; Khagram 2018). By conditioning appropriations and influencing decisions at the World Bank and other global financial institutions, the US effectively exercised its instruments of dominance to shape development trajectories in the Global South, affirming the phenomena posited by dependency theory where core nations, such as the US, perpetuate and reinforce the subordination of peripheral nations in the global economic system (Babb 2013; Darrow 2003; Frossard 2000; Moody 2008; Payer 1975; Peet 2009; Stiglitz and Pike 2004; Soederberg 2004; Stuckler and Basu 2009; Wade 1996).

US Legislative Impact on World Bank Policies

Dependency Theory Perspective

Several US Acts have directly given the US the power to enforce conditionalities at the World Bank (Ferraro 2008; Foot, MacFarlane, and Mastanduno 2003; Kapur, Lewis, and Webb 2011; Webber 2004; Woods 2003). The following US legislation is associated with the core tenets of dependency theory (Lavelle 2011; Cardoso and Faletto 1979).

The Foreign Assistance Act (FAA) of 1961: This Act consolidates US foreign assistance programs. While it primarily focuses on bilateral aid, it establishes general provisions that may influence multilateral institutions by dictating the terms and priorities of US participation in these entities (Lancaster 2007; Picard et al. 2007; Radelet 2003; Tarnoff and Lawson 2009).

The International Financial Institutions Act (IFIA) of 1977: This Act provides the legal foundations for US participation in various international financial institutions, including the World Bank. It grants the president of the elected US government the authority to direct US executive directors at institutions such as the World Bank on various policies (Bird 2003; Gould 2003; Kapur, Lewis, and Webb 1998; Lumsdaine 1993; Woods 2014).

Appropriations Acts: Congress exercises power over the World Bank and other international financial institutions by specifying conditions for US appropriations to these organizations. For instance, Congress can place conditions on US contributions to the

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International Development Association (IDA), a subsidiary of the World Bank that assists the world's poorest countries (Copelovitch 2010; Fleck and Kilby 2006; Gunter and Manuel 2016; Hawkins and Hawkins 2008; Kilby 2009).

The Leahy Laws: While primarily targeting military assistance and training programs, the principles outlined in these provisions regarding human rights can indirectly influence US policies and priorities at the World Bank, especially in contexts where security and development intersect (Carleton and Stohl 1985; Morgan 2016; Tate 2011; Thoms and Ron 2007).

The Foreign Operations, Export Financing, and Related Programs Appropriations Acts: Various iterations of this Act have included language directing the US Executive Director of the World Bank to use the US vote to advocate for specific policies or to oppose particular types of projects in periphery nations (Brainard and Chollet 2008; Browne 2006; Lancaster 2007; Milner and Tingley 2010; Woods 2005).

US Dominance in World Bank Policy

Influence through Legislative Framework

The US, by virtue of being the largest shareholder in the World Bank, has a significant influence on the institution's policy and operations (Dreher, Sturm, and Vreeland 2009; Kapur, Lewis, and Webb 2011; Kelsey 2018; Stone 1989; Woods 2000). These Acts, among others, provide the legislative framework for the US to exercise its influence, including the imposition of conditionalities on the World Bank's operations and policies (Babb and Buira 2005).

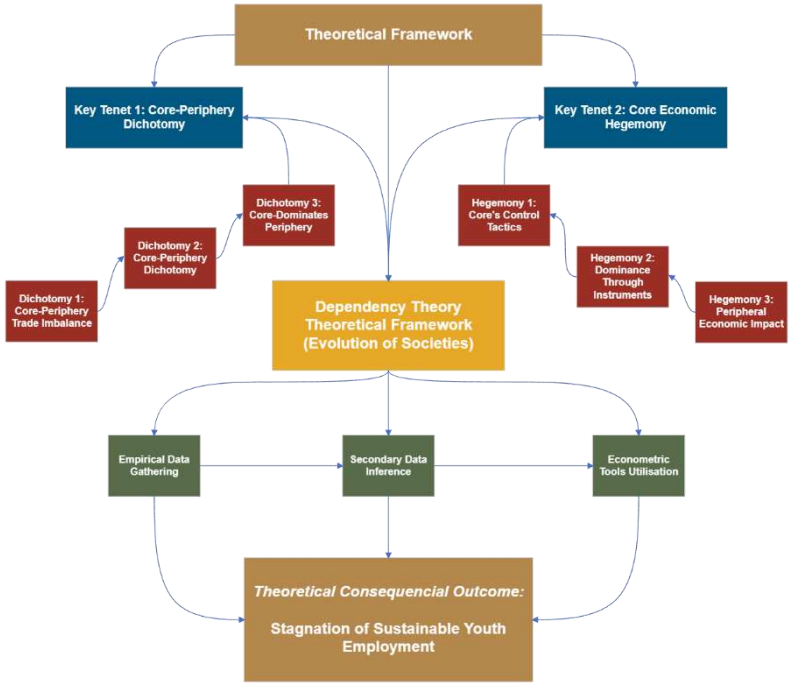


Figure 1: Dependency Theory Theoretical Framework (Evolution of Societies)

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Empirical Literature Review: Green Technology Investments

Green Growth and the Forced Requirement to Meet US Demands

Investment in renewable energy technologies has seen substantial growth in the US, with the value reaching 32.3 billion US dollars in 2022, up from 29.1 billion US dollars in 2013 (Statista 2022, 2023). Such advancements contribute to sustainable development and job creation (Nill and Kemp 2009). Although significant literature underscores the economic benefits in developed nations, there is a recognized gap concerning the repercussions of these investments in developing countries, particularly South Africa (Ockwell et al. 2008).

Youth unemployment, a pressing global concern, is particularly pronounced in South Africa, with rates soaring to 68 percent, encompassing those in further education who may remain jobless after graduation (Statistics SA 2021; Bell and Blanchflower 2011). While the US has initiated various programs to address this issue, mirrored initiatives such as the Small Enterprise Finance Agency (SEFA) have been established in South Africa (Holzer 2021). However, the intersection of green technology investments and their potential to mitigate youth unemployment remains under-researched (Chigunta 2002). Simultaneously, the role of SMMEs cannot be understated. SMMEs are pivotal for economic growth and job creation and have consistently bolstered the US economy (Ayyagari, Demirguc-Kunt, and Maksimovic 2011; Kobe 2012). However, the emergence and influence of green SMMEs on youth unemployment in South Africa remains relatively untouched in research (Rogerson 2008; Weaich, Simbanegavi, Ndlovu, and Root 2023).

Scholarly discourse has delved into green technology investments and youth unemployment independently but seldom from a comparative lens between developed and developing countries, such as the US and South Africa (Bhorat et al. 2014; Naidoo and Gasparatos 2018; Weaich, Simbanegavi, Ndlovu, and Root 2023). Although some argue for nation-specific focus, attributing it to distinct economic and social climates (Chimucheka and Mandipaka 2015), it inadvertently ignores cross-national learning potentials and effective policy transfers. There is a glaring absence in comparative studies that concurrently address green technology investments and youth unemployment, especially considering the vast econometric disparities between the US and South Africa (Lundvall 1992; Mol and Spaargaren 2000).

The World Bank's Role in Its Foreign Policy Objectives

US' Influence Balancing Global Economic Loans and Dependency Dynamics

The World Bank was established with the aim of providing economic and technical assistance to developing nations (Mason and Asher 1973). Over the years, it has become a salient institution in shaping the economic policies and trajectories of developing nations (Riddell 1997). The World Bank's influence, consequently, is not only derived from its institutional mandate, which promotes neoliberalism, market deregulation, privatization, and fiscal

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austerity but is significantly influenced and shaped by its major shareholders, most notably, the US (Harvey 2007).

While there are several pieces of legislation, such as IFIA of 1977, the Bretten Woods Agreements, and Leahy Laws, this study specifically examines The United States Foreign Assistance Act of 1961, which governs economic aid distribution as a manifestation of US legal and economic influence on global financial institutions, such as the World Bank (Brainard and Chollet 2008; Browne 2006; Lancaster 2007; Milner and Tingley 2010; Woods 2005). Although this piece of legislation aims to promote US foreign policy objectives, it can be at odds with the SDGs of recipient financial institutions and peripheral nations, such as South Africa (Brainard and Chollet 2008; Irwin, Vedel, and Vikkelsø 2021; Lancaster 2007; Picard and Buss 2009; Van Der Walt 2009). Notably, the emphasis on free-market reforms, advocated within the Act, can exacerbate systematic inequalities in developing nations, further entrenching dependency dynamics on global financial institutions (Ohiorhenuan 1978). These principles, "designed" to spur economic growth, are often linked to socioeconomic implications that can exacerbate inequalities and dependencies (Stiglitz and Pike 2004). For developing or 'periphery' nations such as South Africa, the adoption of these policies may conflict with the current socioeconomic needs of the periphery nation (Chang 2008; Easterly 2006; Williamson 1990).

South Africa's Challenges

Exploring the Role of Global Financial Policies and Youth Unemployment

South Africa, unique in history and socioeconomic landscape, has made significant strides post-apartheid; however, challenges such as unemployment and a stark wealth gap alongside income inequality persist. While various factors influence this, the stringent fiscal and austerity policies endorsed by global international financial institutions, under the influence of "core" countries, play a salient feature in unemployment and poverty exacerbation in "periphery" nations such as South Africa (Bond 2003; Ferguson 2006; Fine 2018; Guelke 2001; Habib and Padayachee 2000; Marais 2001; Tereblanche 2002; Toussaint and Bond 2023). Youth unemployment is intrinsically linked to poverty, and this is well documented with numerous studies highlighting the long-term socioeconomic consequences of youth unemployment on a nation (Arnett 2000; Chigunta 2002; Furlong 2006; Gutner 2005; Jubane 2021; O'higgins 2001; Scarpetta, Sonnet, and Manfredi 2010).

The World Bank's neoliberal conditionalities do not account for these challenges; illustrating this with the promotion of fiscal austerity can lead to a reduction in both private and public sector employment, a critical sector for South Africa to improve upon to meet its SDGs (Bond 2008; Fine and Saad-Filho 2017; Harrison 2004; Jomo and Fine 2006; Mkandawire 2004; Rodrik 2018; Stiglitz and Pike 2004). These imposed policies and conditionalities provide for macroeconomic sustainability, which can inadvertently increase

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dependency on global international financial institutions and 'core' nations as they often ignore the microeconomic realities faced alongside the socioeconomic implications (Babb 2009; Chang 2003; Easterly 2005; Mosley and Harrigan 1995; Peet 2009; Stiglitz 2007; Vreeland 2003; Wade 2004).

This study, through its approach, identifies this lacuna in the literature by elucidating a profound understanding and synthesis of these issues, particularly the effect of green technology investments on youth unemployment and the subsequent evolution of green SMMEs (Scott 2014). Analytical methodologies, exemplified by this study's empirically sourced data, are validated through a theoretical purview, confirming the observed phenomenon in reality (Creswell 2009; Popper 2008).

Summary of Theoretical and Empirical Insights

In the literature review, the interrelationship between US sustainable green investments and the youth unemployment crisis in South Africa is meticulously dissected, with a focus on testing the applicability of dependency theory to these contemporary economic interactions. Theoretically, the US controls the policy in South Africa through foreign investments, which has the potential to affect and influence growth and employment in the country.

Literature indicates a noticeable void in the critical examination of the socioeconomic impacts of such investments and their role in the broader sustainable development discourse. As empirical evidence depicts a possible correlation between the flow of sustainable initiatives from the US and the intensifying youth unemployment situation in South Africa, considering the close economic relationship between the two countries as evident through AGOA, where political afflictions generally break economic ties, the US remains reliant on the natural resources it procures from South Africa, foregoing its political stance to restrict trade to countries not particularly in line with its militaria agenda.

A temporal investigation into the empirical existence of a dependency relationship between these two nations is posited as essential for validating the persistence of dependency theory in the twenty-first century. This study challenges the status quo to reconsider and potentially revise the policies and legislation that shape the direction and effectiveness of these investments. It also highlights a significant research gap regarding the measurement of these investments' contributions to the SDGs; furthermore, a study that probes the extent to which US foreign policy may systematically contribute to resolving the unemployment issues observed in South Africa, which is not evident in the body of knowledge, echoing a substantial contribution to policy and practice is yet to be made.

Syllogistic Summary of Conceptualized Literature

Green Investments as Catalysts for Environmental and Societal Benefits

A Logical Framework for Sustainable Development Technologies is as follows:

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S1: Major Premise: All technologies that support sustainable development are beneficial for the environment and society.
Minor Premise: Green investments fund the development and implementation of green technologies.
Conclusion: Therefore, green investments are instrumental in promoting technologies that benefit the environment and society, contributing to sustainable development.

The Impact of US Policy Conditionalities on SA's Sustainable Development

The Role of Vector Error Correction Modeling in unveiling long-term equilibrium relationships is as follows:
S2: Major Premise: Any significant long-term equilibrium relationship between international policy conditionalities and a nation's sustainable development initiatives can be effectively analyzed using the Vector Error Correction Model (VECM).
Minor Premise: The US imposes policy conditionalities on South Africa, which are critical for South Africa's sustainable development initiatives and require analysis over time to understand their impact.
Conclusion: Therefore, using VECM to analyze the policy amendments to sustainable development conditionalities imposed by the US on South Africa is essential for understanding and forecasting the long-term impact of these conditionalities on South Africa's sustainable development efforts.

Influence of US-Controlled Sustainable Development

Policies on youth unemployment in South Africa and assessing their socioeconomic impacts as follows:
S3: Major Premise: Effective sustainable development policies, when influenced or controlled by external entities like the US, can significantly impact a nation's socioeconomic factors, including employment rates.
Minor Premise: Youth unemployment in South Africa is a critical socioeconomic issue that can be affected by international sustainable development policies and initiatives.
Conclusion: Therefore, sustainable development controlled by the US has a consequential impact on youth unemployment in South Africa, indicating that changes in these development policies must influence the employment landscape for South African youth.

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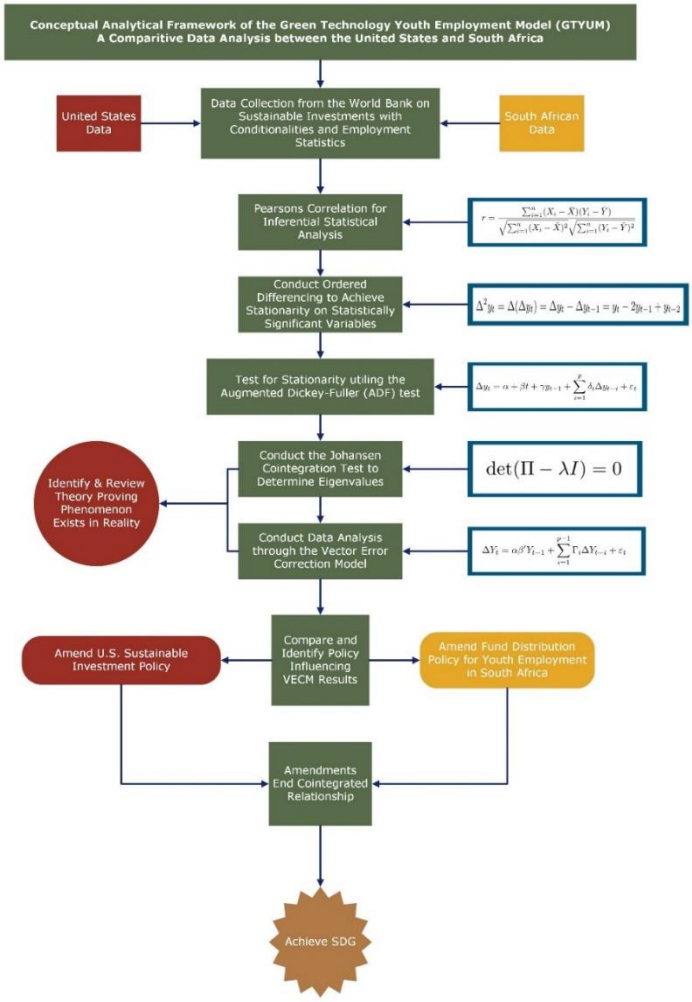


Figure 2: Conceptual Analytical Framework of the Green Technology Youth Employment Model (GTYUM)

Methodology

This study integrates a theoretical framework that encompasses economic, social, and environmental perspectives to provide a comprehensive understanding of the relationship between green technology investments and youth unemployment (Lundvall 1992; Mol and Spaargaren 2000; Scott 2014). Using secondary data analysis, quantitative methods, including regression analysis, Pearson's correlation, and time series analysis, are employed (Enders 2015; Field 2013). Further analysis, addressing data spanning 17 years will be tested for cointegration (Enders 2015; Field 2013). Sources such as the World Bank, Statista, and Statistics South Africa (StatsSA) provide the primary data pool. With a foundation in a positivist philosophy, this study emphasizes empirical investigation and objectivity through deductive reasoning (Bryman 2016; Creswell 2009; Saunders, Lewis, and Thornhill 2023).

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Data from the US and South Africa were specifically selected because of their distinct economic landscapes and pertinent information on funding conditionalities (Yin 2018). Analysis was conducted using SPSS and MATLAB, maintaining rigorous data integrity standards (Smith 2008; Tabachnick, Fidell, and Ullman 2013). Key variables include green technology investments and youth unemployment rates for individuals aged 15 to 24. The study's design enables hypothesis testing through a statistical evaluation of established databases as advocated by Pallant (2020) and addresses an existing literature gap (Wiek, Withycombe, and Redman 2011). Methods include a novel Green Technology Youth Unemployment Correlations (GTYUC) model, the augmented Dickey–Fuller (ADF) test, series differencing, and the Johansen Cointegration test, ensuring methodological robustness (Enders 2015; Field 2013; Box, Jenkins, and Reinsel 2008; Chatfield 2003). The study will further employ systematic and inferential legal analysis to identify the legal frameworks of the US and South Africa, and their influence on conditionalities imposed by core nations on peripheral nations in the analysis of statutes, regulations, and legal precedent (Sacco 1991). The purpose of this methodology is to gauge the influence of green technology investments and funding conditionalities on youth unemployment in South Africa, correlating with broader sustainable development and poverty alleviation objectives as highlighted in the SDGs of both nations. The time series data play a crucial role in detecting interrelated patterns, particularly in economic scenarios (Chatfield 2003; Enders 2015). When substantial correlations emerge, multivariate time series forecasting becomes applicable, utilizing past data to enhance future series predictions (Hyndman and Athanasopoulos 2021). Such techniques yield in-depth market insights, illustrating their saliency in deciphering external impacts (Enders 2015).

Data

Table 1: Youth Unemployment Statistics in South Africa and the US

Year	*Youth Unemployment Rate SA (%)*	*Youth Unemployment Rate USA (%)*	*GDP SA (Billions USD)*	*GDP USA (Billions USD)*	*Sustainable Investments for SA (Billions USD)*	*Sustainable Investments for the USA (Billions USD)*
2006	47	11	304	13,816	2	353
2007	46	11	333	14,474	3	381
2008	37	13	316	14,770	3	409
2009	39	18	330	14,478	2	407
2010	46	18	417	15,049	3	412
2011	40	17	458	15,600	3	431
2012	42	16	434	16,254	3	436
2013	43	16	401	16,843	3	457

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2014	44	13	381	17,551	3	478
2015	42	12	347	18,206	3	507
2016	44	10	324	18,695	2	532
2017	43	9	381	19,477	3	564
2018	43	9	404	20,533	3	616
2019	47	8	389	21,381	2	677
2020	43	15	338	21,060	2	727
2021	50	10	419	23,315	3	661
2022	50	8	406	25,463	3	764

The World Bank (2023), issued under Creative Commons Attribution 4.0 (CC-BY 4.0)

Table 2: Green Technology Youth Employment Model Temporal Model

Model Name		*Green Technology Youth Employment Model (GTYUM)*
Series Name	1	Year
	2	US_GDP_Millions
	3	US_Youth_Pop_Ages_15-24_Millions
	4	SA_GDP_Millions
	5	US_Sustainable_Investments_Millions
	6	SA_Sustainable_Investments_Millions
	7	SA_Youth_Pop_Ages_15-24_Millions
Transformation		None
Non-Seasonal Differencing		0
Seasonal Differencing		0
Length of the Seasonal Period		No periodicity
Maximum Number of Lags		16
Process Assumed for Calculating Standard Errors of the Autocorrelations		Independence (white noise) [a]
Display and Plot		All lags

Data extracted and adapted from the World Bank (2023), database issued under Creative Commons Attribution 4.0 (CC-BY 4.0) and the Open Database License (ODbL). Applying the model specifications from the Green Technology Youth Employment Model (GTYUM). [a]Not applicable for calculating the standard errors of the partial autocorrelations.

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Results

The Green Technology Youth Unemployment Correlations Model (GTYUC) underscores a pronounced correlation between time and several independent variables, notably the time index for this study was analyzed annually. Key variables included US Gross Domestic Product, US youth population aged 15 to 24, South African Gross Domestic Product, sustainable investments in both the US and South Africa, and South African youth population aged 15 to 24. The varying strengths of these correlations indicate that time intricately interacts with past data. This intricate interaction led to the development of a time series analysis, underscoring the predictive capacity of past values for future predictions. By mapping these temporal relationships, the GTYUC offers deep insights into prevailing trends and patterns, thereby enhancing the precision of forecasting for informed policy recommendations (Enders 2015).

Table 3: Correlations Summary Table

Correlations Summary Table					
Series:	*Year*				
Lag	*Autocorrelation*	*Std. Error*[a]	*Box-Ljung Statistic*		
			Value	*df*	*Sig.*[b]
1	0.824	0.223	13.691	1	0.000
2	0.650	0.215	22.775	2	0.000
3	0.480	0.208	28.100	3	0.000
4	0.319	0.201	30.622	4	0.000
5	0.167	0.193	31.370	5	0.000
6	0.027	0.185	31.391	6	0.000
7	–0.098	0.176	31.702	7	0.000
8	–0.206	0.167	33.223	8	0.000
9	–0.294	0.157	36.715	9	0.000
10	–0.360	0.147	42.705	10	0.000
11	–0.402	0.136	51.403	11	0.000
12	–0.417	0.124	62.619	12	0.000
13	–0.402	0.111	75.666	13	0.000
14	–0.355	0.096	89.264	14	0.000
15	–0.275	0.079	101.434	15	0.000

Data extracted and adapted from the World Bank (2023), database issued under Creative Commons Attribution 4.0 (CC-BY 4.0) and the Open Database License (ODbL). [a]The underlying process assumed is independence (white noise). [b]Based on the asymptotic chi-square approximation.

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In examining the econometric data between the US and South Africa. It is evident that the US boasts significantly greater sustainable investments, in terms of both average and range. Concurrently, South Africa grapples with a youth unemployment rate that is nearly four times higher than that of the US. Additionally, regarding environmental impact, the US is responsible for a considerably larger percentage of greenhouse gas emissions than South Africa.

Table 4: Millions vs. Percentage of Youth Unemployed to GHGs

Descriptive Statistics (Millions vs. Percentage of Youth Unemployed to GHGs)					
Variable:	N	Minimum	Maximum	Mean	Std. Dev.
US_Sustainable_Investments_ Millions	17	353352988473	764089774150	5.18E+11	1.28E+11
SA_Sustainable_Investments _Millions	17	2362280355	3058619033	2671021568.94	218055534.026
US_PRCNT_Unemp_Youth_Ages_15-24	17	0.0813000	0.1842000	0.125564706	0.0350246688
SA_PRCNT_Unemp_Youth_Ages_15-24	17	0.3739000	0.4957000	0.439594118	0.0334722548
US_Green_House_Gas_Emissions_ (kt_of CO2_equivalent) _1_PRCNT	17	0.9157852	0.9339405	0.921191029	0.0055314134
SA_Green_House_Gas_Emissions_ (kt_of CO2_equivalent) _1_PRCNT	17	0.0660595	0.0842148	0.078808971	0.0055314134
Valid N (listwise)	17				

Data extracted and adapted from the World Bank (2023), database issued under Creative Commons Attribution 4.0 (CC-BY 4.0) and the Open Database License (ODbL)

A statistically significant moderate positive correlation was found between youth unemployment rates in South Africa and sustainable investments in the US ($r = 0.450$, $p = 0.035$). This supports the claim that green technology investments are linked with higher youth unemployment rates in both the US and South Africa. A significant moderate positive correlation between South African youth unemployment rates and US GDP was identified ($r = 0.539$, $p = 0.013$). This evidence depicts that while sustainable investments, through green technology investments, are beneficial; however, they correlate with higher youth unemployment rates in both nations. The interplay between sustainable investments and youth unemployment demands deeper exploration.

Analysis for Inferential Statistics

Dependent Variable: Youth Unemployment Rates in the US and South Africa (US-SA-UYP).

Independent Variables: Year (2006–2022) (Yr), South African GDP (SAGDP), US GDP (USGDP), Sustainable Investments in South Africa (SASIM), and Sustainable Investments in the US (USIM).

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GDP (0.971)

US and South African GDP growth does not seem to alleviate youth unemployment. With US youth unemployment remaining steady and South Africa's youth unemployment rising alongside increased GDP, it depicts that economic growth is not directly linked to youth employment benefits.

Youth Unemployment (0.406)

Sustainable markets in the US and South Africa appear to not effectively incorporate youth. As US sustainable investments increase, youth unemployment rates also rise in both nations. This correlation indicates that economic growth might not be sufficient to reduce youth unemployment rates. The correlation data implies that while the US's' green technology investments rise and foreign investment is given as aid with conditionalities to South Africa, it inadvertently affects youth unemployment in South Africa. This observation calls for further investigation to decipher the impact of global economic activities on youth employment. Notably, the strong tie between US GDP and its green investments indicates that a prospering economy is conducive to green technology investments, which may lead to more employment opportunities, but not for the youth.

Table 5: Pearsons's Correlations between Youth Unemployment and Sustainable Investments with Conditionalities

Correlations				
		SAUYP	*USSEM*	*USGDP*
Pearson Correlation	*SAUYP*	1.000	0.450	0.539
	USSEM	0.450	1.000	0.968
	USGDP	0.539	0.968	1.000
Sig. (1-tailed)	*SAUYP*		0.035	0.013
	USSEM	0.035		0.000
	USGDP	0.013	0.000	
N	*SAUYP*	17	17	17
	USSEM	17	17	17
	USGDP	17	17	17

Data extracted and adapted from the World Bank (2023), database issued under Creative Commons Attribution 4.0 (CC-BY 4.0) and the Open Database License (ODbL).
SAUYP: SA Percent Unemployed Youth Aged between 15 and 24
USSEM: US Sustainable Investments in Millions
USGDP: US GDP in Millions

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SA GDP and SA Sustainable Investments (0.814)

There is a strong positive correlation indicating that as South Africa's economy grows, its sustainable investments also increase. This influences employment opportunities in green sectors.

US GDP and US Sustainable Investments (0.968)

US green investments heavily rely on its GDP, indicating that a booming economy favors sustainable investments. This, in turn, should open employment avenues in non-youth sectors. However, they indicate that while US green investments might lead to youth unemployment locally, they might similarly affect international markets, such as South Africa.

Summary of Inferential Statistics Results

Policymakers should consider these insights. Although green investments are pivotal for sustainable development goals (SDGs) realization, there is a need to ensure that other SDGs, like poverty reduction and youth employment, are not compromised.

Table 6: Youth Unemployment, Sustainable Development Investments, and Gross Domestic Products Correlations

		USSAUYP	*Yr*	*USGDP*	*SAGDP*	*USIM*	*SASIM*
PC	*USSAUYP*	1.00	–0.08	–0.08	0.41	–0.09	0.20
	Yr	–0.08	1.00	0.97	0.34	0.96	0.14
	USGDP	–0.08	0.97	1.00	0.31	0.97	0.16
	SAGM	0.41	0.34	0.31	1.00	0.23	0.81
	USIM	–0.09	0.96	0.97	0.23	1.00	0.02
	SASIM	0.20	0.14	0.16	0.81	0.02	1.00
Sig.1-t	*USSAUYP*		0.38	0.38	0.05	0.36	0.22
	Yr	0.38		0.00	0.09	0.00	0.30
	USGDP	0.38	0.00		0.12	0.00	0.27
	SAGM	0.05	0.09	0.12		0.19	0.00
	USIM	0.36	0.00	0.00	0.19		0.47
	SASIM	0.22	0.30	0.27	0.00	0.47	
N	*USSAUYP*	17.00	17.00	17.00	17.00	17.00	17.00
	Yr	17.00	17.00	17.00	17.00	17.00	17.00
	USGDP	17.00	17.00	17.00	17.00	17.00	17.00
	SAGM	17.00	17.00	17.00	17.00	17.00	17.00
	USIM	17.00	17.00	17.00	17.00	17.00	17.00
	SASIM	17.00	17.00	17.00	17.00	17.00	17.00

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Analysis for Econometrics to Affirm Inferential Statistics Results

Null Hypothesis (H_0)

US green technology investments do not have a statistically significant impact on the growth of youth unemployment in South Africa, ceteris paribus.

Engle and Granger (1987) pointed out the risk of spurious correlation when using linear regression for time series analysis as this study uses these principles to draw inferential correlations on periodical data, a null hypothesis must be rejected to confirm the inferential statistics results to omit speculation of spurious correlation, though a confirmatory modeled result. Should the study wish to maintain rigor, mitigating a spurious correlation depicts a non-misleading statistical relationship between time series variables due to coincidence or an unknown third factor. To address this, stationarity of the time series must be established using the augmented Dickey–Fuller (ADF) test (Said and Dickey 1984). Once confirmed, the Johansen Cointegration test determines the cointegration of variables (Johansen 1988). This is then to be modeled using the VECM to confirm the validity of the result to assess policy (Johansen 1995).

Results of the augmented Dickey–Fuller (ADF) Test

SA Unemployed Youth Aged Between 15 and 24: *p*-value ~ 0.999. US Sustainable Investments in Millions: *p*-value ~ 0.998. US GDP in Millions: *p*-value = 1.0. These high p-values indicate that the time series is non-stationary. Before the commencement of cointegration analysis, series stationarity is typically achieved by differencing (Box, Jenkins, and Reinsel 2008). After applying second-order differencing, the ADF test revealed significantly lower *p*-values, confirming the series' and results in this study achieved stationarity, thus fulfilling the cointegration analysis prerequisite (Box, Jenkins, and Reinsel 2008).

Results after Second-Order Differencing (SoD)

SAUY_PRCNT: *p*-value ~ 0.0015
US_SE_Millions: *p*-value ~ 0.0133
US_GDP: *p*-value ~ 0.00045

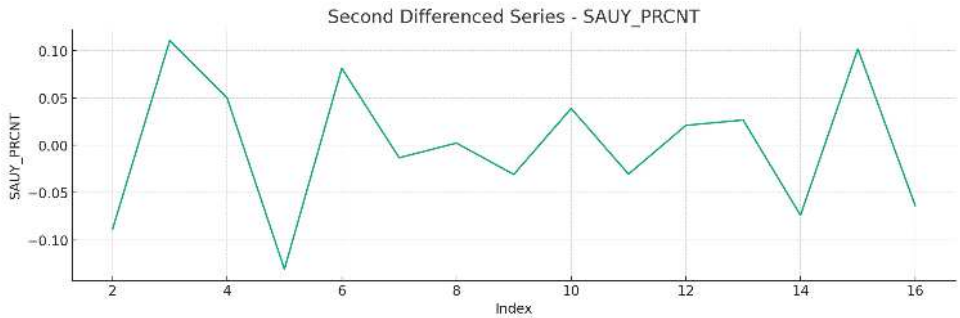


Figure 3: Second Differenced Series—SA Unemployed Youth Aged between 15 and 24

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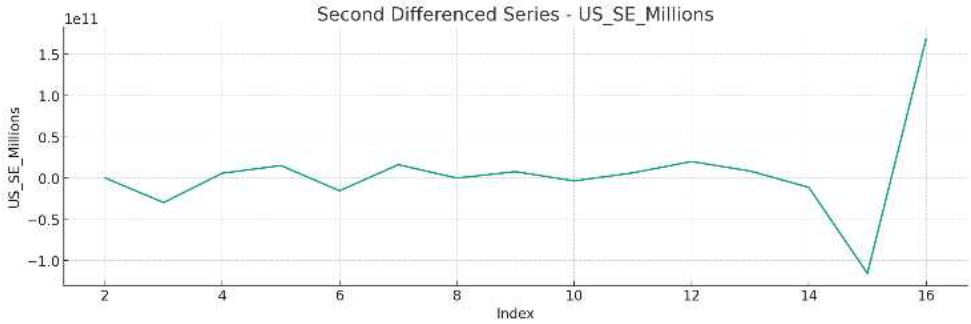


Figure 4: Second Differenced Series—US Sustainable Investments in Millions

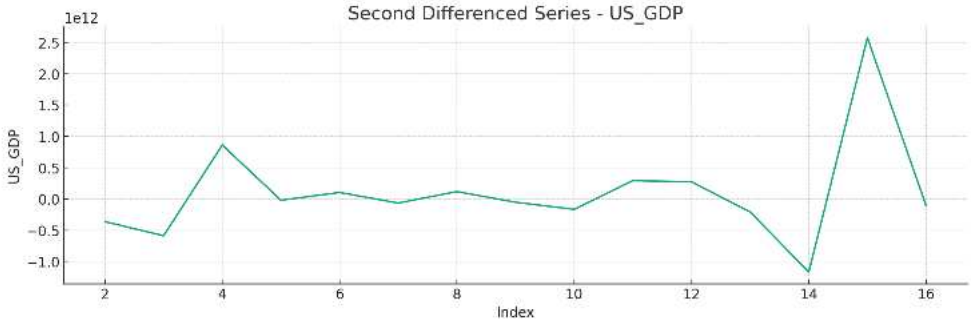


Figure 5: Second Differenced Series—US GDP in Millions

Johansen Cointegration Test Results

Eigenvalues versus 5 Percent Critical Values

71.03 vs. 29.80
37.27 vs. 15.49
9.58 vs. 3.84

The eigenvalues surpass the 5 percent critical values, signifying three cointegrating relationships among "SAUY_PRCNT," "US_SE_Millions," and "US_GDP." This underscores a long-term equilibrium linkage between these variables. Given this, estimating the cointegrating vectors becomes imperative, as they depict that the long-term relationships among the variables exist, while all other variables remain constant (Johansen 1995).

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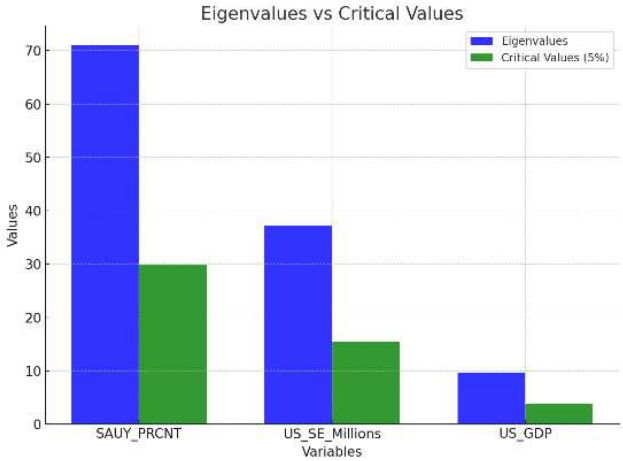


Figure 6: Eigenvalues vs. Critical Values of Johansen Cointegration test

Results from the VECM

The Johansen test identified three cointegrated relationships among the SA Percent Unemployed Youth aged 15 to 24, US Sustainable Investments in Millions, and US GDP in Millions. Extracted from the VECM output, both the cointegrating vectors, indicating equilibrium relationships, and the adjustment coefficients, highlighting the rapidity of variables' reversion to equilibrium after deviations (Engle and Granger 1987). The profound cointegration depicts disturbances to one variable affecting the others, evidencing a complex connection between South African youth unemployment, US sustainable investments, and US GDP (Johansen 1995). Such links are to be attributed to foreign investments or conditionalities imposed on the South African economy and imply a shared long-term equilibrium among these factors.

The cointegrating vectors illuminate the equilibrium levels and the direction in which the variables gravitate toward (Johansen 1995). For instance, an uptick in US sustainable investments indicates requisite adjustments in South African youth unemployment and US GDP to sustain a long-term balance and equilibrium. This offers a foundation for in-depth studies probing the mechanisms intertwining these variables. The adjustment coefficients reveal the pace at which each variable realigns to long-term equilibrium after disruptions (Johansen 1995). Specifically, a significant adjustment coefficient for South African unemployed youth implies swift recalibration of South African youth unemployment in response to shifts in US sustainable investments or GDP. Grasping these elements uncovers the intricate interdependencies between these variables, extending beyond mere movements to their equilibrium readjustment velocities (Johansen 1995). This knowledge primes for the creation of holistic models that consider both short-lived and enduring relationships. For policymakers, these cointegrated variables must shape strategies targeting sustainable economic climates.

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If US sustainable investments profoundly influence South African youth unemployment, corresponding policies could harness this link for mutual advantage. For investors, understanding this long-term synchronicity aids risk evaluations and fortifies investment strategies, especially in multi-country ventures. Moreover, comprehending these cointegrated links has societal ramifications. Initiatives boosting US sustainable investments might concurrently address South African youth unemployment, if they are readdressed, fostering a unified strategy for societal enhancement. In essence, recognizing these cointegrated relationships introduces intricate dynamics and simultaneously offers a pathway for more efficacious and enduring decisions across various sectors.

Discussion of Results

The study identified a significant correlation between South African youth unemployment and sustainable investments over time from the US, which is in alignment with similar studies performed between core and periphery nations (Cardoso and Faletto 1979; Dos Santos 1996; Dreher, Sturm, and Vreeland 2009; Dreher and Jensen 2007; Ferraro 2008; Fleck and Kilby 2006; Rogerson 2008). This correlation, impacted by US legislative Acts, influences South African policymakers eager for funding and underlines the need for an in-depth exploration of the universal applicability of investment conditions in international financing (Dreher, Sturm, and Vreeland 2009; Dreher and Jensen 2007; Kapur, Lewis, and Webb 2011; Kelsey 2018; Stone 2008; Weaich, Simbanegavi, Ndlovu, and Root 2023; Woods 2000, 2003, 2014, 2005). The Foreign Assistance Act of 1961 is crucial for understanding how US aid influences unemployment and poverty in South Africa, impacting its ability to meet the SDGs and what applies to other peripheries in Latin America and Asia also applies to South Africa and African nations (Bell and Blanchflower 2011; Comte 1877; Department of Women, Youth and Persons with Disabilities 2020; International Labour Office 2015; Scarpetta, Sonnet, and Manfredi 2010; Statistics SA 2021, 2022).

The results in this study echo the numerous findings in literature and confirm that the legal framework of the US, particularly through the World Bank, significantly affects peripheral countries, and is now confirmed to be the same in South Africa (Babb 2013, 2009; Babb and Buira 2005; Darrow 2003; Fleck and Kilby 2006; George 2019; Harrison 2004; Harrison and Mason 2019; Weaich, Simbanegavi, Ndlovu, and Root 2023). Understanding the correlation between youth employment and sustainable economic indicators over time informs nuanced policy recommendations and confirms the academic rigor of econometric analysis on policy (Box, Jenkins, and Reinsel 2008; Enders 2015). The results further echo that GDP growth alone is insufficient to address youth employment challenges, necessitating policies that specifically target youth unemployment, and mitigates negative inference from sustainability funding conditionalities (Stiglitz and Pike 2004). It identifies the cointegration relationship between US sustainability funding through global institutions such as the World

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Bank and South Africa's poverty levels is evident in the Johansen Cointegration test results (Johansen 1988).

The study confirms and reaffirms a plethora of literary works on the conflict between domestic law and the principles of conditionalities imposed by global financial institutions, particularly in the case of South Africa; political agenda misalignment has severe consequences for the SDGs of peripheral countries, particularly between the US and South Africa (Brainard and Chollet 2008; Browne 2006; Lancaster 2007; Milner and Tingley 2010; Statistics SA 2022; Thatcher and Milner 2016; The United Nations 1945; Woods 2000, 2003, 2014, 2005).

Conclusion

This study provides insights into the intricate dynamics between the World Bank, the IMF, US green technology investment policy, and youth unemployment in South Africa. It establishes a significant correlation, shaped by investment conditionalities from core to peripheral nations, and highlights the need for a revised theoretical and practical approach to understanding and implementing the SDGs between nations. These findings emphasize the crucial impact of these investments on South Africa's unemployment rates, urging a balanced and nuanced approach that reconciles international obligations with local socioeconomic needs. This research deepens the understanding and expands the body of knowledge on how global sustainable investments influence emerging economies, with a specific focus on South Africa, and its relationship with the US. In an era prioritizing sustainable growth, it is vital to assess the effects of investment terms on domestic markets critically. This study lays the groundwork for developing policies that synergize global investment strategies with the unique economic realities of countries like South Africa, as observed from an objective Aristotelian perspective. It calls for a concerted effort to align these strategies with the SDGs, particularly in reducing youth unemployment and fostering sustainable development in African nations. This study underscores the necessity of a nuanced, theory-informed approach to global investments, advocating for policies that not only adhere to international standards but also resonate with and support the developmental objectives of peripheral economies.

Recommendations

This investigation highlights the relationship between sustainable investments, their conditionalities, and the impact on unemployment, particularly in South Africa. The findings reveal the significant role of investment conditions in shaping unemployment patterns in peripheral countries. These insights demonstrate the profound effect of sustainable investment criteria on unemployment, contextualized within the framework of the SDGs and underscore their broader socioeconomic repercussions. Given the complex interplay between global financial institutions such as the World Bank and the economic

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scenarios in nations such as South Africa, the study depicts the need for a holistic approach. It advocates for strategic principles that address the nuances of this relationship and contribute to formulating comprehensive policies and strategies. These principles should consider the balance between global financial practices and the unique economic and social contexts of peripheral countries, aligning them with sustainable development objectives and addressing key challenges such as youth unemployment.

The Following Policy Amendments Are Hereby Recommended to the US.

1. Foreign Assistance Act (FAA) of 1961: Amend to include provisions that prioritize the SDGs in recipient countries. This could involve setting specific targets or criteria for sustainable investments, particularly in areas that directly address youth unemployment and economic diversification.
2. International Financial Institutions Act (IFIA) of 1977: Revise to mandate US representatives at international financial institutions, such as the World Bank, to advocate for investment policies that are tailored to the unique socioeconomic contexts of recipient countries, preventing the exacerbation of periphery dynamics between the transacting countries. This would encourage a shift from a one-size-fits-all strategy to a more nuanced, country-specific approach.
3. Appropriations Acts: Adjust the Acts to ensure that US contributions to international financial institutions are contingent upon the institutions' adherence to the principles that support equitable and sustainable economic growth in peripheral nations, assessing the impact of conditionalities before funding. This could include stipulations for debt relief initiatives and support for economic diversification.
4. Leahy Laws: While primarily focused on military assistance, these laws could be expanded to include provisions that ensure that US foreign aid does not contribute to or exacerbate economic dependencies in recipient countries. This could involve strict monitoring of how aid is used and its impact on local economies, particularly in countries with no military involvement but a continued economic partnership, prioritizing the achievement of the SDGs above military objectives.
5. Foreign Operations, Export Financing, and Related Programs Appropriations Acts: Reform to align the Acts more closely with the sustainable development aspirations of recipient countries. This could involve specific language directing US representatives at global financial institutions to prioritize investments that offer tangible benefits in areas like youth employment, education, and skills development.

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The Following Policy Amendments are Hereby Recommended to SA

1. Youth Employment Service Initiative (2018): Enhance the YES Framework to integrate sustainable investments more effectively into youth employment strategies. This would involve aligning the policy with the SDGs, focusing specifically on creating green job opportunities for the youth (Youth Employment Service Initiative 2018).
2. Small Business Development Act No. 102 of 1996: Amend the Small Business Development Act to prioritize support for green SMME growth. This could include incentives for sustainable practices and green technology adoption, fostering job creation in green technology investment sectors (Small Business Development Act No. 102 of 1996).
3. National Development Plan (NDP 2030): Adjust the NDP to ensure that its objectives are aligned with sustainable investment goals and SDGs, particularly those targeting youth unemployment and economic diversification (National Development Plan 2030).
4. Skills Development Act No. 97 of 1998: Revise this Act to focus on skills training in green technologies from sustainable industries, address the skills gap in the youth workforce, and align itself with the demands of a green economy (Skills Development Act No. 97 of 1998).
5. Broad-Based Black Economic Empowerment Act No. 53 of 2003: Amend the BBBEE Act to include specific provisions supporting youth employment in sustainable green technology sectors. This would involve creating pathways for young people, especially those from disadvantaged backgrounds, to participate in and benefit from green economic growth (Broad-Based Black Economic Empowerment Act No. 53 of 2003).

These recommended amendments will align US and SA in directing foreign aid and participation in international financial institutions more closely with the SDGs fostering poverty reduction in peripheral countries such as South Africa. They advocate for a more equitable global financial system that acknowledges and addresses the diverse needs and goals of all nations. Essential to this process is the role of both global institutions and core nations, as well as the proactive involvement of peripheral countries like South Africa. Collaborative efforts, rooted in mutual respect and a common vision for sustainable futures, are crucial for achieving effective outcomes that align with global SDGs and tackle youth unemployment challenges. This perspective is based on the clear influence of investment conditions, particularly the conditionalities imposed on the African continent, and their effects on domestic economies. Skillful management of these aspects can enhance the benefits of sustainable investments while mitigating potential drawbacks. For nations like South Africa, understanding the relationship between sustainable investments and their associated

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conditionalities is vital for effectively navigating and leveraging these economic dynamics. Future research should therefore focus on a meticulous assessment of specific investment conditionalities and their direct impact on youth unemployment in South Africa, exploring their socio-cultural and economic consequences. Such analysis will enrich economic theory and practical policymaking, particularly within the framework of sustainable development and the achievement of SDGs. Further, comparing these impacts across various African countries will illuminate regional economic differences and the varied effects of foreign investments from different global regions, thereby contributing to a more nuanced understanding of the complex interplay between international investments and local economic conditions in the African context.

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Conflict of Interest

The author declares that there is no conflict of interest.

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