

Research Article | Araştırma Makalesi

State capacity and United Nations peacekeeping operations in Sub-Saharan Africa: Empirical insights

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Abstract

State capacity, as a key concept in the security and development nexus, has garnered increasing attention in political science over the past decades. This study examines the impact of specific variables on state capacity in Sub-Saharan Africa from 2000 to 2015, a region characterized by weak state capacity and high conflict rates globally, and which hosts the largest number of peacekeeping operations worldwide. Over time, United Nations (UN) peacekeeping operations have evolved from traditional mandates focused on ceasefire maintenance to broader, multidimensional tasks that encompass peacebuilding and support for state capacity, particularly within the region. This study utilizes panel data analysis and a sample of nine countries to assess state capacity through variables such as GDP per capita, natural resource rents, regulatory quality, armed forces personnel, and UN peacekeeping operations (PKOs). Panel data regression analysis across nine Sub-Saharan African countries reveals different influences of the variables on state capacity. The results of the study reveal a negative impact of PKOs, natural resource rents, and armed forces personnel on state capacity, while GDP and regulatory quality demonstrate positive contributions. The results suggest that PKOs cannot effectively enhance state capacity without the presence of realistic mandates and local ownership.

Keywords: UN Peacekeeping, State Capacity, Sub-Saharan Africa, Panel Data Analysis **JEL Codes:** F50, F53

Devlet kapasitesi ve sahra altı Afrika'da Birleşmiş Milletler barışı koruma operasyonları: Ampirik görüşler

Öz

Devlet kapasitesi, güvenlik ve kalkınma ilişkisi bağlamında temel bir kavram olarak, son yıllarda siyaset biliminde giderek artan bir şekilde ilgi görmektedir. Bu çalışma, 2000-2015 yılları arasında belirli değişkenlerin Sahraaltı Afrika'da devlet kapasitesi üzerindeki etkisini incelemektedir. Küresel ölçekte zayıf devlet kapasitesi ve yüksek çatışma oranlarıyla öne çıkan bu bölge, aynı zamanda dünya genelinde en fazla barışı koruma operasyonuna ev sahipliği yapmaktadır. Zaman içinde Birleşmiş Milletler (BM) barışı koruma operasyonları, ateşkesin korunmasına odaklanan geleneksel yetki alanlarından çıkarak, özellikle bu bölgede, barış inşasını ve devlet kapasitesine desteği içeren daha geniş ve çok boyutlu görevlere evrilmiştir. Bu çalışma, panel veri analizi kullanarak ve dokuz ülkeyi kapsayan bir örneklem çerçevesinde, devlet kapasitesini kişi başına düşen GSYİH, doğal kaynak rantları, düzenleyici kalite, silahlı kuvvetler personeli ve BM barışı koruma operasyonları gibi değişkenler aracılığıyla değerlendirmektedir. Sahra Altı Afrika'daki dokuz ülke üzerinde gerçekleştirilen panel veri regresyon analizi, değişkenlerin devlet kapasitesi üzerindeki çeşitli etkilerini ortaya koymaktadır. Çalışmanın sonuçları, barışı koruma operasyonlarının, doğal kaynak rantlarının ve silahlı kuvvetler personelinin devlet kapasitesi üzerinde olumsuz bir etkisi olduğunu, buna karşın GSYİH ve düzenleyici kalitenin olumlu katkılar sunduğunu göstermektedir. Bulgular, gerçekçi yetki alanları ve yerel sahiplenme olmaksızın barışı koruma operasyonlarının devlet kapasitesini etkili bir şekilde güçlendiremeyeceğini öne sürmektedir.

Anahtar Kelimeler: BM Barışı Koruma, Devlet Kapasitesi, Sahraaltı Afrika, Panel Veri Analizi **JEL Kodları:** F50, F53

Introduction

UN peacekeeping missions constitute one of the most effective mechanisms developed throughout history for the peaceful resolution of international disputes. The concept of peacekeeping was invented by the United Nations as an ad hoc mechanism in response to the failure of the collective security system during the Cold War (Boutros Boutros-Ghali, 1992). Traditional UN peacekeeping refers to field operations conducted in conflict zones under the authority of the United Nations, with voluntary support from member states. These operations remain neutral and only use force when it is essential to carry out their mandate (Goulding, 1993). However, in response to the shortcomings in Somalia, Bosnia and Herzegovina, and Rwanda, the UN Secretariat proposed a series of initiatives to enhance peacekeeping operations, advocating for a more robust peacekeeping concept that also encompassed peacebuilding (Boutros Boutros-Ghali, 1992; UN General Assembly, 2000). UN peacekeeping has transitioned

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from a traditional mandate to a broader and more complex one that includes peacebuilding components. These missions have operated in a range of new areas, including facilitating political transition processes, organizing elections, strengthening administrative structures, training police and military forces, protecting civilians, disarmament, reintegration, delivering humanitarian aid, establishing the rule of law, and supporting infrastructure, in countries with weak public order and ongoing violence.

This shift in peacekeeping practices has also attracted significant attention in academic circles, leading numerous scholars to focus on defining and categorizing these operations in the literature (Howard, 2008; Bellamy et al., 2004; Diehl, 1993; Fetherston, 1994). The literature collectively demonstrates the mitigating effects of these operations on the intensity and duration of conflicts, as well as on the number of casualties (Beardsley & Gleditsch, 2015; Di Salvatore & Ruggeri, 2017; Howard, 2008; Hultman et al., 2013). However, these evaluations on the effectiveness of PKOs predominantly assess performance through the lens of security outcomes. Additionally, some studies have focused on post-conflict contexts to gain insight into the long-term effects of peacekeeping missions (Di Salvatore & Ruggeri, 2017; Doyle & Sambanis, 2006; Fortna, 2008; Sambanis, 2008). The study contributes to this evolving trend by examining the impact of PKOs on state capacity. To the best of the knowledge, there are relatively few studies that have evaluated the effects of PKOs on state capacity (Di Salvatore & Ruggeri, 2020). The primary research question of this study is how UN PKOs have influenced state capacity in Sub-Saharan Africa (SSA) during the period from 2000 to 2015. Given that Multidimensional¹ PKOs have been reformulated with a broad mandate as a means of state-building, the study expects that new missions will significantly influence the capacity of the host state. Consequently, it is crucial for the study to first provide a definition of state capacity. Despite the extensive body of literature, conceptualisations of state capacity remain fairly consistent, with most emphasising the state's implementation power derived from well-functioning institutions and a professionalised bureaucracy (Cingolani 2013, 36). The study begins by drawing on this foundational conceptualization, which also reflects Weber's strong theoretical legacy. For the purposes of this study, it adopts a definition of state capacity rooted in neo-Weberian insights, which emphasize the state's authority and capability to effectively respond to modern contexts (Bouckaert, 2022; Lynn, 2008). Within this framework, the approach of the study considers two dimensions of state capacity: the first relates to coercive capacity, referring to the monopoly on violence, and the second to productive capacity, which pertains to the state's economic performance.

The study aims to elucidate the potential impact of specific variables associated with the concept of state capacity, with a particular focus on PKOs, by examining Sub-Saharan Africa during the period from 2000 to 2015. In this regard, total armed forces personnel, (arm) and UN peacekeeping operations (pkos) are included in the model as indicators of coercive capacity, while real GDP per capita (gdppc), total natural resource rents (tnr) and regulatory quality (rq) serve as indicators of productive capacity. The study builds on the work of Di Salvatore and Ruggeri (2020), who link different dimensions of state capacity to the UN peacekeeping activities of new operations and provide descriptive trends. However, the study specifically employs panel data analysis, thereby statistically modelling the relationship between state capacity, peacekeeping operations, and other variables across countries and time periods. The study begins by evaluating the impact of multidimensional peacekeeping operations on state capacity. Given that Sub-Saharan Africa has hosted the highest number of such missions, the study focuses on this region. Using the State Capacity Index (SCI) (Hanson and Sigman 2021), the study aims to clarify the effect of past and ongoing peacekeeping missions deployed in Sub-Saharan African countries between 2000 and 2015 on state capacity. This period was selected for its distinct characteristics, notably the emergence of multidimensional peacekeeping initiatives. The study focuses on Burundi, the Central African Republic, Chad, Côte d'Ivoire, Sudan, the Democratic Republic of Congo, Mali, Liberia, and Sierra Leone, as these countries have hosted multidimensional peacekeeping missions.² Data on these missions is obtained from the UN Peace and Security Data Hub (UN, 2023). The study employs a panel data model, incorporating both time and cross-sectional dimensions, to analyse empirically the state capacity of the selected countries. While acknowledging the limitations in drawing general conclusions from peacekeeping missions, the study recognizes the significance of mission-specific analysis. Nevertheless, the study aims to provide broader insights. Due to data constraints in the region, certain variables — such as education level, institutional effectiveness, and tax revenue indicators — could not be included in the analysis, which presents a limitation for this research.

The rest of the study is organised as follows: The literature section reviews the relevant studies on state capacity. The subsequent section discusses the mandates of UN PKOs, emphasizing their role in peacebuilding efforts in the region. The methodology section outlines the approach used in the study, and the data and results section introduce the dataset, model, and empirical findings. Finally, the conclusion offers a summary of key insights and provides recommendations for future research.

¹ The study defines multidimensional peacekeeping based on Doyle and Sambanis (2000), describing it as a consent-based approach that combines traditional peacekeeping strategies with multidimensional capacity expansion and institutional transformation to build peace.

² Eritrea and Ethiopia, although falling within the scope of the selected period and region of the study, are excluded from the analysis. This exclusion is due to the traditional peacekeeping nature of the United Nations Mission in Ethiopia and Eritrea's (UNMEE) mandate, which focused primarily on monitoring and verification tasks, in contrast to their multi-dimensional operations central to the study.

1. Literature Review: State Capacity

First and foremost, identifying an appropriate definition of state capacity is crucial as the starting point for the study. State capacity has been a contested concept in the political sciences for several decades, particularly within discussions on governance, state-building, and development. The notion of ‘failed states’ as a challenge to global stability (Rotberg, 2002), coupled with the shortcomings of neo-liberal reforms, has strengthened demands for a renewed focus on the role of the state (Skocpol, 1985). Within this context, state capacity has become as an instrumental concept, highlighting the nexus between development and security (Hameiri, 2007). The agenda, built on security and development, has provided a foundation for academic inquiries into the concept. The literature often associates state capacity with one or more dimensions of state power. Despite the lack of a precise definition, there is a prevailing consensus among scholars that state capacity refers to a state's ability to implement its goals and policies (Cingolani, 2013). Nevertheless, there are diverse perspectives on which abilities should be considered essential for a state, the literature reveals an imprecise distinction. One perspective emphasises the state's strength and autonomous power, while the other focuses on the scope and content of its functions (Centeno et al., 2017, 4). The former reflects a commitment to the Weberian conception of the state³, which views state capacity as a form of power (Bäck & Hadenius, 2008; Fearon & Laitin, 2003; Fukuyama, 2004; Lindvall & Teorell, 2016). Thus, coercive capacity captures the monopoly of violence, a prominent dimension in this perspective. Emphasising the notion of stateness, this approach refers to the degree to which a state successfully performs its fundamental functions, including the maintenance of order (Tilly, 1990) and administrative and military control of its own territory (Skocpol, 1985). By introducing the concept of infrastructural power, Mann, (1984, p.189) refined this perspective, highlighting the state's capacity to penetrate society and achieve its objectives. Soifer (2008) presents an in-depth analysis of the infrastructural power, disaggregating it into three key components: the national capabilities of the central state, the state's influence on society, and its territorial reach. In a similar vein, Fukuyama (2004, p. 7) draws attention to the difference between state strength and scope and defines state capacity as ‘the ability of states to plan and execute policies.’ At this juncture, administrative capacity plays a vital role in executing policies and is likely the most frequently discussed dimension of state capacity in the literature (Fukuyama, 2013; Geddes, 1994; Knutsen, 2013). It refers to the capacity to effectively design and implement policies, relying primarily on a competent and professional bureaucracy. However, some other perspective may consider a broader range of functions, capturing various dimensions of state capacity, including fiscal, legal, transformative, and political (Cingolani, 2013). It is more concerned with the capacity aspect, categorizing it into different dimensions (Berwick & Christia, 2018). For instance, extractive capacity emphasises the state's ability to take resources from society and is strongly linked to its taxation authority (Besley & Persson, 2008; Cárdenas & Tuzemen, 2010; Dinuccio & Prado, 2012). Productive capacity refers to a country's ability to produce goods and resources that support its development (Evans, 1995; Evans & Rauch, 1999; Rauch & Evans, 2000). However, there is a consistency that state capacity refers to the state's ability to effectively implement its policies and objectives. The study adheres to a narrow conception of state capacity and avoids a normative stance on what constitutes the capacity of the state. Thus, in this study, the definition of state capacity draws on neo-Weberian insights (Bouckaert, 2022; Fukuyama, 2013), emphasizing two fundamental dimensions: Coercive capacity, which refers to the state's ability to ensure sovereignty and military control over a given territory, and productive capacity, which refers to the state's ability to effectively perform an productive role in the economy through well-functioning institutions. Thus, the definition of state capacity draws on neo-Weberian insights, emphasizing two fundamental dimensions: Coercive capacity, which refers to the state's capability to maintain sovereignty and military control over its own territory, and productive capacity, which involves the state's ability to fulfill a productive role for the economy through efficient institutional frameworks. However, it is acknowledged that the dimensions of state capacity are often interrelated in the study. Most studies consider the combination of various dimensions, and many have demonstrated the connections between them (Hanson & Sigman, 2021a; Hendrix, 2010; Lindvall & Teorell, 2016). Researchers have employed a diverse range of metrics to operationalize the concept. Cingolani (2013, p. 38), identifies three primary approaches for gauging state capacity in the literature: “selecting single generic measures; opting for a narrow, focused definition with corresponding proxies; and employing a multi-dimensional index.” The conceptualization of the study aligns with the second approach, providing a foundational framework for a measurement strategy that captures the dimensions of state capacity in the region. The selection of variables is based on existing literature to ensure they effectively capture the aforementioned dimensions, as they are expected to have a significant impact on state capacity. The study focuses on GDP per capita, a typical variable used to measure state capacity. Fearon and Laitin (2003) employ GDP per capita as a proxy of state capacity, suggesting that it broadly encompasses most of its dimensions. Hendrix (2010) includes GDP per capita as one of the variables used to obtain descriptive statistics for measuring state capacity. Di Salvatore and Ruggeri (2020) focus on GDP growth as a potential proxy for assessing productive capacity in their analysis. Furthermore, the expectation is that natural resource revenues in Sub-Saharan Africa provide insights into the productive capacities of the region's states, as the literature on rentier states has already offered important insights into

³ “State is a human community that (successfully) claims the monopoly of the legitimate use of physical force within a given territory” (Weber et al., 1946, 78).

productive capacity by studying the consequences of a state's dependence on primary commodity exports (Collier & Goderis, 2007; Collier & Hoeffler, 2005; Fearon, 2005). Thus, the study focuses on total natural resource rents (tnr), drawing on the literature that examines the relationship between natural resource wealth and state capacity (Shafer, 1994; Snyder & Bhavnani, 2005; Thies, 2010). Regulatory quality (rq), one of the World Bank's Governance Indicators (WGI), is also included as a variable that reflects the state's ability to foster economic growth and facilitate private sector development by effectively implementing regulations and enforcing laws (Besley & Persson, 2009, 2011). The study includes also armed forces personnel (arm) as a commonly used proxy in the literature (Fortin-Rittberger, 2014; Hanson & Sigman, 2021a; Hendrix, 2010). Additionally, UN peacekeeping operations (pkos) are included as a variable, as their activities are expected to influence host state capacity, particularly in supporting governance, institutional effectiveness, and security sector reforms. This underscores the study's originality, as limited research exists on how UN PKOs impact state capacity (Di Salvatore & Ruggeri, 2020; Meiske & Ruggeri, 2024).

2. State Capacity and Un Peacekeeping Missions in Sub-Saharan Africa

In the context of the development-security nexus, the concept of state capacity has emerged as a central focus of the international agenda, particularly concerning the Sub-Saharan region (World Bank, 1989). Since then, international efforts to strengthen state capacity in sub-Saharan Africa have been initiated as countries in the region grapple with civil wars, instability, and underdevelopment. This situation led to the region being considered a source of threat to international stability by international community (Downie & Cooke, 2011; UN, 2004). These countries have weak capacity and are mostly fragile. They have colonial-era borders that disregarded the realities of local populations, exacerbating ethnic rivalry. Additionally, they suffer from weak institutions and public services, along with civil conflict stemming from a lack of authority and legitimacy. The states in the region rank low on the state capacity index, indicating significant deficiencies in governance, institutional effectiveness, and the provision of basic services. These shortcomings have contributed to political instability, thereby perpetuating a cycle of conflict throughout the region. Consequently, the region continues to have the largest number of countries involved in conflict (IEP, 2024) and hosts the largest deployment of UN peacekeepers (SIPRI, 2024). UN PKOs have emerged as not only effective tools for maintaining stability but also for enhancing the capacity of states in the region (UN General Assembly, 2005, 2015). Since 2000, the UN has initiated more than twenty new peacekeeping missions, highlighting the international community's evolving approach to tackling conflicts in Africa. Consequently, several UN missions in the conflict zones, including in Sub-Saharan African countries have faced significant challenges. They have contended with heightened levels of violence, the rise of extremist groups, and the presence of non-state armed actors, facing threats that exceeded their operational capacities. As conflicts have evolved in terms of actors, intensity, and complexity, it has become essential to reassess UN peacekeeping missions both conceptually and practically. The Brahimi Report (2000) offered numerous recommendations aimed at improving the effectiveness of peace operations. It also proposed more robust peacekeeping and realistic mandates. The Brahimi Report emphasised the importance of robust mandates that are adaptable to the specific realities on the ground, particularly in Africa. It also integrated peacebuilding as a fundamental element, ensuring that operations tackled both immediate conflict resolution and long-term institutional development to foster enduring peace and stability. Following the release of the report, the UN soon had the opportunity to implement some of its recommendations. Since the early 2000s, UN PKOs have become multidimensional, involving military, police, and civilian personnel, particularly in the region. The UN mission in Sierra Leone, (UNAMSIL), was deployed to support the government, rebuild its institutions, and promote the rule of law, human rights, and national reconciliation following the end of the civil war (UNSC, 2001). The establishment of the UN Mission in Liberia (UNMIL) in 2003 aimed to aid in the carrying out of the ceasefire and the advancement of the stability. Its mandate included a range of tasks, such as training the police, restructuring the army, and supporting the transitional government alongside security sector reforms (UNSC, 2003). In the following year, UN Operation in Côte d'Ivoire (UNOCI) was launched to assist the host government with the disarmament, demobilization, and reintegration of former fighters, support security sector reform, and oversee and advocate for human rights (UNSC, 2004a). The same year, the transitional government in Burundi received assistance from UN Operation in Burundi (ONUB) in initiating institutional reforms, establishing integrated national defence and internal security forces, conducting police training, supporting electoral activities, and reforming the judiciary in line with the Arusha Agreement (UNSC, 2004b). UN peacekeeping missions in Sudan, particularly UNMIS, UN - African Union Hybrid Operation in Darfur (UNAMID), and UN Interim Security Force for Abyei (UNISFA), combined traditional security tasks with efforts to reform key institutions (UNSC, 2005, 2007, 2011). In response to the growing complexity of the operations, the Department of Peacekeeping Operations (DPKO) also introduced a new set of principles and guidelines to strengthen UN peacekeeping efforts. This document highlighted capacity building as one of the core functions of UN Peacekeeping Operations. Key related activities include "disarmament, demobilization, and reintegration (DDR) of combatants, mine action, security sector reform, various rule of law initiatives, the protection and promotion of human rights, electoral assistance, and support for restoring and extending state authority" (DPKO, 2008). In the light of the past experiences, another document, A New Partnership Agenda: Charting a New Horizon for UN Peacekeeping, emphasised the importance of strengthening partnerships

among the UN, member states, and regional organizations (UN, 2009). Following these reforms, the UN deployed new missions and/or expanded mandates in Chad and Central African Republic, (MINURCAT), Liberia, (UNMIL), Mali (MINUSMA), and Sudan (UNMIS). The UN Organization Mission in the Democratic Republic of the Congo (MONUC) was transitioned to a new mission, gaining additional responsibilities to address the evolving challenges in the Democratic Republic of Congo (UNSC, 2010). These operations have been assigned complex and robust mandates, including capacity-building efforts aimed at strengthening local governance and security institutions. They marked a pivotal shift in peacekeeping by significantly expanding the use of force and broadening the mandates. The mandates encompassed a wide range of tasks, including overseeing the peace process, training national police forces, assisting in the creation of a newly restructured military, supporting economic development, and reinforcing law, order, and state authority. This evolution reflects a more integrated approach to peacebuilding, where capacity-building efforts were prioritized alongside traditional security tasks. However, UN operations in sub-Saharan Africa have yielded contentious results, particularly regarding their failure to protect civilians. Furthermore, numerous peacekeepers have faced allegations of corruption or sexual abuse (UN General Assembly, 2014). In many countries within the region, peacekeeping missions have persistently failed to achieve their objectives, largely due to a mismatch between their mandates and the complex realities and urgent needs on the ground. According to Williams (2021), peacekeepers encountered substantial challenges in the region due to unclear objectives, contradictory directives, and extensive task lists lacking clear prioritization, which hindered effective mission execution. For instance, in Democratic Republic of Congo (DRC), peacekeepers encountered the complex challenge of supporting government authority and protecting civilians, even as government forces were significant perpetrators of violence. This inconsistency in objectives limited the mission's ability to reduce widespread violence against civilians in eastern Congo. Additionally, the absence of a unified stance within the UN and the Congolese government's lack of commitment to meaningful reform were major contributors to the mission's shortcomings (Doss, 2015). Similarly, in Sudan, UNMIS faced significant restrictions due to the government's limited willingness to cooperate and provide consent (Holt et al., 2009). Such that inadequate cooperation with local authorities, combined with logistical challenges and internal divisions, led to the kidnapping of peacekeepers in Sierra Leone. While UNAMSIL is regarded as one of the few successful peacekeeping operations, these challenges hindered the mission's peacebuilding agenda (Adebajo, 2021). Similarly, ONUCI was unable to fully implement its mandate due to 'consent under pressure' from the host country (Piccolino, 2014). MINURCAT faced analogous challenges, leading to its legitimacy being undermined and the Chadian government requesting its early withdrawal. This trend is echoed across sub-Saharan Africa, with both Mali and the Democratic Republic of Congo requesting the withdrawal of UN peacekeepers. Consequently, several missions have been reduced to mere monitoring activities or, in some cases, terminated altogether. In response, UN introduced the Action for Peacekeeping (A4P) to enhance missions through collective action among stakeholders, with a particular emphasis on strengthening partnerships with host countries (UN, 2018). While specific reasons for failure vary across missions, a general pattern has emerged, including overloaded and unrealistic mandates as well as limited local ownership in the region.

The study will employ the SCI framework to operationalize the effects of UN peacekeeping missions on the aforementioned countries. According to the index (Hanson and Sigman 2021), capacity measures the degree to which a state exercises control over its territory, sustainably generates adequate resources, and maintains skilled and impartial security forces as well as public servants. This approach, which corresponds to coercive and productive capacity in the study's framework, encompasses and articulates the study's conceptualization of state capacity. The study's model posits that deficiencies in any or all the dimensions represented by the variables significantly influence the overall capacity of countries in Sub-Saharan Africa.

3. Methodology

Panel data is a multi-dimensional dataset that captures observations across both time and entities. It combines cross-sectional data (N, representing the number of groups) with time-series data (T, representing the number of time periods). The groups may consist of firms, industries or countries. The panel data method is commonly used to analyse data that changes over time and can help control for not observed or measured variables that may affect the dependent variable. Consider the following fixed effects panel data model:

$$Y_{it} = \alpha_i + \beta X_{it} + e_{it} \text{ for } i = 1, \dots, N, t = 1, \dots, T \quad (1)$$

In this model, i denotes the cross-sectional dimension, while t represents the time series dimension. Here, Y_{it} denotes the outcome variable for entity i at time t and α_i is the unknown intercept unique to each entity (with n entity-specific intercepts). X_{it} is a vector of predictors for entity i at time t . The term u_i represents the within-entity error, while e_{it} denotes the overall error term. In this context, β represents a common effect across entities, accounting for individual heterogeneity.

Panel data is employed in the study as it integrates both cross-sectional and time-series data, capitalizing on the strengths of each. The key advantages of panel data over time-series and cross-sectional data can be summarized as follows: (i) increased efficiency of estimators; (ii) the ability to model the complexity of human behaviour with greater capacity than a single cross-section or time-

series data; (iii) the ability to control for potentially correlated, time-invariant heterogeneity without directly observing it; (iv) a reduction in multicollinearity among explanatory variables (Pesaran and Smith 1995; Pesaran 2004; Hsiao 2006). The use of panel data model enabled to examine the impact of multidimensional operations on state capacity in Sub-Saharan African countries.

To ensure the selection of the most appropriate panel data model, a series of diagnostic tests were conducted. First, the Chow test was performed to determine whether the pooled Ordinary Least Squares (OLS) model is suitable or whether country-specific effects are present. The Chow test assesses whether the regression parameters are homogeneous across different cross-sectional units. Under the null hypothesis (H_0), the parameters are identical across groups, indicating that pooling the data is valid. Conversely, under the alternative hypothesis (H_1), the parameters differ, implying that group-specific effects exist. The test compares the residual sum of squares (RSS) from the pooled model with that of the group-specific regressions using an F-statistic. A statistically significant F value suggests that the pooled model is inappropriate, and that individual effects should be accounted for.

Second, the Breusch–Pagan Lagrange Multiplier (LM) test was employed to examine the presence of random effects. The null hypothesis of the test ($H_0: \sigma_\alpha^2 = 0$) assumes that there are no random effects and that the pooled OLS model is sufficient. Rejection of this hypothesis indicates significant random variation across cross-sectional units, thereby supporting the use of the random effects model as a more appropriate specification.

Finally, the Hausman specification test was conducted to distinguish between the fixed effects and random effects models. The null hypothesis ($H_0: \text{Cov}(x_{it}, \alpha_i) = 0$) posits that the random effects model is consistent and efficient, assuming no correlation between the individual (country-specific) effects and the explanatory variables. If the null hypothesis is rejected, this indicates the presence of correlation between these effects and regressors, in which case the fixed effects model is preferred, as it yields consistent and unbiased parameter estimates (Baltagi, 2021; Güriş, 2018).

4. Data and Model

The study aims to assess the impact of peacekeeping operations and the other related variables on state capacity in nine Sub-Saharan African countries during the period from 2000 to 2015. The model is primarily based on the work of Di Salvatore and Ruggeri (2020) and relevant literature, and is structured as follows:

$$sci_{it} = \beta_0 + \beta_1 pko_{it} + \beta_2 gdppc_{it} + \beta_3 tnr_{it} + \beta_4 arm_{it} + \beta_5 rq_{it} + \varepsilon_{it} \quad (2)$$

The State Capacity Index *sci* (Hanson and Sigman 2021) is used as the dependent variable in the analysis, with higher values represent greater state capacity. The independent variables are as follows: The peacekeeping operations *pko* dummy variable is coded as 1 when peacekeeping operations are present and 0 otherwise, representing a binary distinction (yes = 1, no = 0)⁴; *gdppc* refers to GDP per capita (constant 2015 US\$); *tnr* represents total natural resource rents (% of GDP); *arm* refers to the total number of armed forces personnel; and *rq* indicates regulatory quality. Table 1 provides a detailed overview of the dataset, including variable descriptions and their respective data sources.

Table 1. Data Set

Variables	Label	Definition	Data Source
State Capacity Index	sci	Higher values represent greater state capacity	Jonathan Hanson and Rachel Sigman (2021)
Peacekeeping Operations	pko	Dummy variable equal to 1 if a peacekeeping operation is present, and 0 otherwise.	United Nations Peace and Security Data Hub
GDP per capita	gdppc	GDP per capita (constant 2015 US\$)	World Development Indicators (WDI)
Natural Resource Rents	tnr	Total natural resource rents (% of GDP)	World Development Indicators (WDI)
Armed Forces Personnel	arm	Total number of armed forces personnel	World Development Indicators (WDI)
Regulatory Quality	rq	Indicator measuring perceptions of the ability of the government to formulate and implement sound policies and regulations (World Governance Indicators).	World Governance Indicators (WGI)

⁴ The PKO variable was obtained by the author from the United Nations Peace and Security Data Hub. (<https://psdata.un.org/>). Other variables are sourced from the World Development Indicators (WDI). (<https://databank.worldbank.org/>).

In the following section, descriptive statistics for the variables, correlation matrix, along with graphs illustrating the change in the dependent variable *sci* across the countries included in the analysis, are presented.

Table 2. Descriptive Statistics

Variable	Mean	Std. dev.	Min	Max
sci	-0.776	0.404	-1.586	-0.05479
pko	0.50	0.501	0	1
lngdppc	8.3252	5.2377	5.667	23.296
tnr	14.9801	9.198	2.322	40.492
lnarm	10.011	1.360	7.600	12.484
rq	-1.0885	0.340	-1.855	-0.330

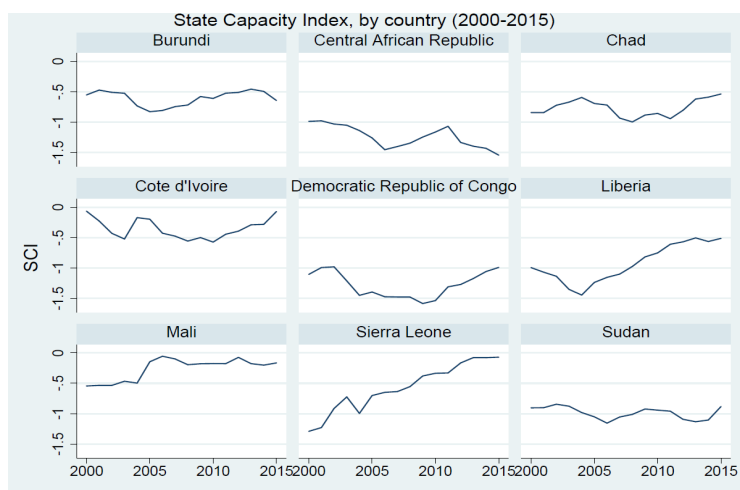
This table presents the descriptive statistics of the panel dataset for Sub-Saharan African countries. The State capacity index (*sci*) shows generally negative values, with a mean of -0.776 , indicating substantial variation across countries. The peacekeeping operations (*pko*) variable is binary (0–1), and approximately half of the countries experienced such operations during the observed period. The GDP per capita and armed forces personnel variables were logarithmically transformed to account for scale differences. Table 3 presents the correlation matrix, providing a concise overview of the pairwise linear relationships among the variables, including both the direction and strength of their associations.

Table 3: Correlation Matrix.

Variable	sci	pko	gdppc	tnr	arm	rq
sci	1					
pko	-0.335 (0.0000)	1				
lngdppc	0.4761 (0.0000)	-0.2106 (0.0113)	1			
tnr	-0.3506 (0.0000)	0.1583 (0.0508)	-0.3623 (0.0000)	1		
lnarm	-0.1773 (0.0044)	-0.0407 (0.6473)	-0.1329 (0.133)	0.1953 (0.0266)	1	
rq	0.8091 (0.0000)	-0.3109 (0.0002)	0.6354 (0.0000)	-0.4169 (0.0000)	-0.3709 (0.0000)	1

The correlation matrix indicates that the dependent variable (*sci*) has significant relationships with the independent variables: it is positively correlated with *rq* and *gdppc*, and negatively correlated with *pko* and *tnr*. Correlations among the independent variables are generally moderate or low, suggesting no serious multicollinearity issues, although the correlation between *rq* and *gdppc* (0.635) warrants monitoring through VIF analysis. The VIF results show that all independent variables have values below 2.5, with a mean VIF of 1.63, indicating no serious multicollinearity problem in the model. The VIF values for the remaining variables are also quite low, confirming that the regression coefficients are reliable. Detailed VIF analysis results are provided in the Appendix 1.

Figure 1. State Capacity Index (2000-2015)



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As shown in Figure 1, the State Capacity Index for the nine Sub-Saharan African countries analysed has negative values, indicating that these countries have low state capacity. Overall, the figure reveals that Sierra Leone and Liberia show a relatively upward trend in state capacity over the long term, although the values remain negative. The Central African Republic is observed to have relatively lower state capacity compared to the other countries during the analysed period. Finally, the study observes that there were no significant changes in the state capacity of Sudan throughout this period. The common characteristic of these countries is that they both have low state capacity and host UN multidimensional peacekeeping operations

5. Empirical Results

Table 4 presents the results of the Chow, Breusch–Pagan LM, and Hausman tests, which were conducted to determine the most appropriate panel data specification. The Chow and Breusch–Pagan LM tests assess whether pooled OLS is sufficient or whether fixed or random effects are needed, while the Hausman test evaluates whether a fixed or random effects model is more consistent and efficient.

Table 4. Chow, Breusch–Pagan LM, and Hausman Test Results

Dimension	Test	Statistic	Model Selection
Cross-section	Chow Test (PE/FE)	F = 26.28 (0.000)	FE
	Breusch-Pagan Test - LM Test (PE/RE)	$\chi^2 = 104.56$ (0.000)	RE
	Hausman Test (FE/RE)	$\chi^2 = 61.75$ (0.000)	FE
Time	Chow Test (PE/FE)	F = 0.58 (0.744)	PE
	Hausman Test (FE/RE)	$\chi^2 = 71.18$ (0.000)	FE

The results presented in the Table 4 indicate that, for the cross-sectional dimension, both the Chow and Hausman tests favor the fixed effects (FE) specification. While the Chow test for the time dimension suggests that a pooled effects (PE) model may suffice, the Hausman test indicates that FE remains the more appropriate choice. Consequently, the fixed effects model is adopted overall, as it effectively accounts for unobserved heterogeneity across countries, which appears to be substantial in the dataset. In Table 5, the estimation results of the fixed effects panel data model, along with the results of testing the assumptions related to the model, are presented.

Table 5: Result of Panel Model Estimation 2000-2015.

State Capacity Index		Coefficient	Std. err.	Prob.
	pko	-0.107	0.034	0.003**
	lngdppc	0.585	0.095	0.000***
	tnr	-0.007	0.002	0.009**
	lnarm	-0.107	0.034	0.002**
N=9	rq	0.419	0.084	0.000***
T=16	constant	-4.049	0.863	0.000***

Testing assumptions for fixed- effects panel data model

Hausman test	chi2(5) = 61.75 Prob=0.000	Ho is rejected, fixed-effects model
Modified Wald test	chi2 (9) =14.69 Prob = 0.121	Ho is not rejected, there is no heteroskedasticity
Slope Heterogeneity Test	Delta = 1.669 Prob=0.095	Ho not rejected at 5% slopes can be considered homogeneous
Pesaran CD test	CD=(0.675) Prob=0.499	Ho is not rejected; there is no cross-sectional dependence

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Note: The values in parentheses represent p-probability. Significance levels are indicated by ***, **, and * for 1%, 5%, and 10%

thresholds, respectively. The assumptions of the model have been tested, and the results of these tests are reported above. Since the panel data model satisfies the necessary assumptions, the estimation results of the fixed effects panel data model are presented.

Based on the panel model estimation results, the estimated coefficient for the real GDP per capita (*gdppc*) variable is statistically significant at the 1% level and is positively signed in the model. This finding shows that a 1% increase in GDP per capita increases the state capacity by approximately 0.00585 units, which means that real GDP per capita enhances state capacity.

That result is aligned with (Fearon and Laitin 2003; Hendrix 2010; Hanson and Sigman 2021; Babajide, Ahmad, and Coleman 2021). The total armed forces personnel (*arm*) is statistically significant and negatively signed at the 5% level, with an estimated coefficient of -0.107 (a 1% increase in armed forces personnel decreases the State Capacity Index by approximately 0.00107 units). This aligns with the findings of Hanson and Sigman (2021a), who identified that indicators related to military and police personnel exhibit the weakest correlation with capacity. These findings align with those of (Dragu & Gieczewski, 2024; Gupta et al., 2001), who demonstrate that while military expenditures and employment can enhance a state's repressive capacity, they are often linked to corruption and bureaucratic inefficiencies, which ultimately reduce overall state capacity. The estimated coefficient for total natural resource rents (*tnr*) is -0.007, statistically significant at the 1% level, indicating a negative relationship with state capacity. In the model, the *tnr* variable exhibits the smallest effect on state capacity.

This finding is consistent with Thies (2010) and Hendrix (2010) and supports broader literature linking primary commodity dependence to low quality of government (Collier & Goderis, 2007; Collier & Hoeffler, 2004; Frankel, 2010). The estimated coefficient for the regulatory quality (*rq*) variable is statistically significant at the 1% level, indicating a positive effect on state capacity and consistent with (Hanson and Sigman 2021). The model shows that the *gdppc* and *rq* variables have high levels of statistical significance (1%) and the highest positive coefficients (0.585 and 0.419, respectively). This indicates that these variables have a significant and substantial impact on state capacity. Finally, the peacekeeping operations (*pkc*) variable has an estimated coefficient of -0.107, statistically significant at the 5% level and negatively associated with state capacity. This finding shows that the presence of a peacekeeping operation reduces a country's State Capacity Index by approximately 0.107 units compared to when no operation is present. Despite Meiske and Ruggeri (2024) whose findings show that many state capacity-related indicators improve during UN PKO deployment, the study finds that PKOs do not enhance state capacity in the region. The findings align with (Doyle & Sambanis, 2000), who suggest that multidimensional peacekeeping operations with civilian functions, which typically lack mandates to enforce compliance when parties do not cooperate, are generally ineffective in ending violence or facilitating meaningful institutional and political reform.

Conclusion

Since 1960, over 20 UN PKOs have been deployed across Sub-Saharan Africa. The region continues to experience the highest rates of armed conflict and hosts the largest deployments of peacekeeping personnel globally (SIPRI, 2024). Given the ongoing challenges of fragility and high conflict rates in Sub-Saharan Africa, focusing on the region's state capacity is more critical than ever. This study seeks to explore the potential impact of specific variables related to the concept of state capacity, with a focus on Sub-Saharan Africa from 2000 to 2015. As expected, the findings suggest that real GDP per capita and regulatory quality enhance state capacity in the region, while total natural resource rents and the size of the armed forces reduce state capacity in the region.

In many Sub-Saharan African countries, the negative relationship between the size of the military and state capacity shows certain underlying dynamics. Large militaries do not always reflect institutional or coercive capacity; rather, they indicate governments that depend on coercion or patronage to sustain authority. This outcome is rooted in the region's colonial legacy. The colonial period left behind fragile states with poor capacity and weak institutions. Consequently, high military expenditure can divert limited state resources from administrative and productive sectors, while also reinforcing rent-seeking and corruption within state institutions, particularly in the security sector. Similarly, heavy reliance on natural resource rents often leads to comparable patronage patterns. Resource wealth tends to weaken economic diversification and institutional accountability, as it consolidates the power of political and economic elites. Thus, both resource rents and oversized armed forces may reproduce the structural vulnerabilities inherited from the colonial period, weakening governance effectiveness rather than strengthening state capacity. These dynamics may explain why the coefficients for both natural resource rents and armed forces personnel are negative in the model. Moreover, higher income levels and better regulatory quality help strengthen state capacity in Sub-Saharan Africa. Economic growth allows governments to invest more in institutions and public services, while good governance ensures that these resources are used effectively. Together, they support state capacity across the region. Overall, these results also support the main argument of this study, which posits that UN peacekeeping operations cannot effectively enhance state capacity without a realistic mandate and strong cooperation among the actors, particularly with the host country.

Policymakers and scholars are increasingly examining the effects of peacekeeping operations on various aspects related to state

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capacity. Contributing to this effort, this study shows that despite the evolution of UN PKOs to include multifaceted mandates aimed at promoting both security and development, their influence on state capacity within the region remains notably limited. Specifically, although PKOs have a broad mandate for peacebuilding initiatives, the findings reveal that they do not consistently enhance the host state's capacity, particularly when mandates lack alignment with on-the-ground realities and when cooperation with the host country is limited. Additionally, a new trend has emerged involving the increasing role of regional organizations, such as the African Union (AU) and the Economic Community of West African States (ECOWAS) in peacekeeping, which may prove vital in addressing the unique local dynamics within the region. As HIPPO Report emphasises "the primacy of politics" is essential to peacekeeping effectiveness (UN General Assembly, 2015). In this context, the study proposes two recommendations regarding policy insights: fostering cooperation among international and local stakeholders and establishing clear and realistic mandates for peacekeeping operations. Overall, this study employed a quantitative approach; however, it highlights the need for further research to achieve more comprehensive results by incorporating qualitative analysis grounded in fieldwork.



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APPENDIX 1: VIF Analysis.

Variable	VIF	1/VIF
rq	2.44	0.41025
gdppc	2.03	0.492545
arm	1.26	0.793114
tnr	1.25	0.801729
pko	1.18	0.846979
Mean VIF	1.63	