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Muhammed KARAKUŞ A Bibliometric Analysis of Demobilization, Disarmament and Reintegration

Uğur DEMİRCİ, Recep ÇENGEL Korkutma Yöntemiyle İşlenen İletişim Yoluyla Dolandırıcılıkla Mücadele: Polis Özel Güvenlik İs Birliği

Tuğba AYDIN HALİSOĞLU Avrupa Birliği ve Akıllı Sınırlar: Sınır Yönetimi ve Güvenlik Üzerine Bir İnceleme

Abdullah ÇELİK Gelişmişlik ve Ekonomik Durumlarına Göre Kentlerde Suç Eğilimleri ve Muhtemel Sebepleri

Hasan GÜL Bilginin Kıymetlendirilmesinde Düşünmenin Rolü: İstihbarat Analizi ve Eleştirel Düşünme

Şükrü Can ÖZTÜRK Drone As First Responder (DFR) Sistemleri: Tanımı, İşleyişi, A.B.D Uygulama Örneği ve Türkiye'deki Uygulanabilirliğine Yönelik SWOT Analizi

Fatih DİKEN 21. Yüzyıl Yetkinlik Çerçeveleri Işığında Liderlik Becerilerinin İncelenmesi: Polis Amirliği Eğitimi Üzerine Bir Değerlendirme





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A Bibliometric Analysis of Demobilization, Disarmament and Reintegration

Muhammed KARAKUŞ*

Abstract: The Disarmament, Demobilization, and Reintegration (DDR) process is critical in helping post-conflict societies transition from violence to peace and stability. This study conducts a comprehensive bibliometric analysis of DDR research over the past two decades, using data from the Scopus database. Analyzing 1,211 publications, the study identifies key trends, thematic focuses, and gaps in the field. It reveals that themes such as reintegration, peacebuilding, and transitional justice are prominent, while gender perspectives and regional case studies are increasingly incorporated. Despite the breadth and heterogeneity of research in this field, significant gaps remain, especially about differentiated consideration of region-specific obstacles and the introduction of interdisciplinary approaches. Moreover, the study offers a roadmap for future research, emphasizing the need to integrate local contexts, ensure sustainable development, and adapt DDR programs to changing conflict dynamics. The findings provide a deeper understanding of DDR's role in global security and development, guiding those working in this field.

Keywords: Theoretical Frameworks, Critical Analysis of Disarmament, Demobilization, Reintegration, DDR, Bibliometric Analysis

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Silahsızlanma, Terhis ve Yeniden Entegrasyon Üzerine Bibliyometrik Bir Analiz

Muhammed KARAKUŞ*

Öz: Silahsızlanma, Terhis ve Yeniden Entegrasyon Süreci (DDR), çatışma sonrası toplumların siddetten barıs ve istikrara gecisinde kritik bir rol ovnamaktadır. Bu calısmada: son virmi vılda DDR alanındaki arastırmalar kapsamlı bir şekilde bibliyometrik analiz yöntemiyle incelenmiş ve Scopus veri tabanından elde edilen veriler kullanılmıştır. 1.211 yayının analiz edildiği araştırmada; alandaki temel eğilimler, odaklanılan temalar ve boşluklar ortaya koyularak yeniden entegrasyon, barış inşası ve geçiş dönemi adaleti gibi temaların ön planda olduğu, aynı zamanda toplumsal cinsiyet perspektiflerinin ve bölgesel vaka çalışmalarının alan yazınına giderek daha fazla dâhil edildiği gösterilmiştir. Ek olarak araştırmaların genişliği ve çeşitliliğine rağmen alan yazınında, bölgelere özgü engellerin ayrıntılı bir şekilde ele alınması ve disiplinler arası yaklaşımların tanıtılması konusunda önemli eksiklikler bulunmaktadır. Bu calısmada; verel bağlamların entegre edilmesi, sürdürülebilir kalkınmanın sağlanması ve DDR programlarının değişen çatışma dinamiklerine uyarlanması gerekliliği ön plana çıkarılarak gelecekteki araştırmalar için bir vol haritası sunulmaktadır. Bulgular, DDR'nin küresel güvenlik ve kalkınmadaki rolüne ilişkin daha derin bir anlayış sağlayarak bu alandaki araştırmacılara bir rehber hükmündedir.

Anahtar Kelimeler: Kuramsal Çerçeveler, Silahsızlanma, Terhis ve Yeniden Entegrasyon (DDR) Sürecinin Eleştirel Analizi, Bibliyometrik İnceleme

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Introduction

For centuries and across all corners of the world, many people have taken up arms to fight injustice, achieve democracy or freedom, or overthrow tyranny. At other times, motivations have been less noble, driven by self-interest or malicious intent, such as those of paramilitary groups, territorial conquests, or armies that have turned against their unarmed populations. Regardless of intent, the use of weapons invariably results in destruction, displacement, fear, desires for revenge, and deep-seated hatred. The overall impact is always negative, making the cessation of arms and their silence a celebrated opportunity for reconciliation, reconstruction, and healing from the wounds of conflict.

No conflict is eternal. Ceasefires are declared, hostilities cease, and peace agreements are signed. At this stage, those who wielded weapons must hand them over to the appropriate authorities, often followed by their destruction. For ex-combatants, surrendering a weapon is a challenging and emotional act, symbolizing the end of one chapter and the beginning of another. One major challenge for post-war societies is persuading ex-combatants to lay down their arms and reintegrate into civil society (Banholzer, 2013, p. 1). To facilitate this transition, Disarmament, Demobilization, and Reintegration (DDR) initiatives, as well as security sector reform (SSR), have become pivotal to both national and international endeavours (Greene & Rynn, 2008; Von Dyck, 2016) aimed at stabilizing post-conflict societies and fostering sustainable development (Dorussen, 2022; Herrera & Peña, 2022a).

The Disarmament, Demobilization, and Reintegration (DDR) process is commonly set in state-centered theoretical frameworks of post-conflict reconstruction that emphasize the reestablishment of the state's monopoly of violence (Bailes et al., 2006). This has been faulted for ignoring community-based paradigms with emphases on local agency and social cohesion (Munive & Stipitate, 2015). Institutionalist models—emphasizing structural stability—and human security frameworks—which emphasize people's well-being—are theoretically opposed throughout the DDR literature. The controversies surrounding these issues are valid, but insufficiently examined in the bibliometric analysis, which will capture trends without rigorously examining their theoretical basis. By tracing the dominance of themes such as reintegration and transitional justice, this research discovers patterns and considers the underlying epistemological presumptions that prioritize some research concerns over others.

DDR is a process where individuals or groups willingly relinquish their weapons, detach from military structures, and transition to stable civilian lives within their communities (Hansen, 2020; Striuli, 2012; Subedi, 2018b, 2018a; Von Dyck, 2016). It is a temporary and limited set of measures focused on the DDR of one or more armed groups consisting of armed individuals, their supporters, and

their families, with the overall objective of restoring the state's monopoly on the use of force (Bailes et al., 2006).

Reintegration, nonetheless, is not just logistical implementation, but a critical component of sustainable peacebuilding and conflict resolution. Effective reintegration reduces the possibility of recidivism by responding to the economic, social, and psychological needs of ex-combatants, hence promoting social cohesion (Banholzer, 2013; Humphreys & Weinstein, 2008). In Colombia, for example, reintegration initiatives that emphasize vocational training and community integration have led to decreased rearmament (Alonso et al., 2018). Conversely, reintegration failures—e.g., a lack of livelihood assistance—can reignite grievances, de-legitimizing peace accords (Muggah, 2009). Thus, DDR must be integrated into broader conflict-resolution structures, with the vision of seeing former combatants transition from perpetrators to stakeholders in peace.

In this sense, DDR processes establish the groundwork to safeguard and sustain communities where ex-combatants can live as law-abiding citizens while laying the foundation for communities to be protected and maintained where former combatants can live as law-abiding citizens. It is important to remember that DDR cannot stop violence or settle disputes independently (OSFU, 2011, p. 4).

DDR evolves with each conflict, adapting lessons and methods to unique situations (UN, 2021). Early DDR programs primarily focused on disarmament and reintegration but later expanded to include processes like repatriation, resettlement, community violence reduction (CVR), and countering violent extremism (AU, 2018). Today, DDR programs are context-specific and encompass a broad spectrum of activities, all potentially relevant to the complex situations faced by conflict-affected societies (OSFU, 2011).

Disarmament involves collecting, registering, and destroying all weapons, ammunition, and explosives held by non-state armed groups and often by civilian populations (Spear, 2013). It refers to non-state actors' voluntary surrender of weapons (e.g., rebel groups, terrorist organizations, or militias), although it may also involve coercion (Herrera & Peña, 2022a; Muggah, 2012; Spear, 2013). Disarmament is both symbolic and practical, aiming to establish a foundation for peace by eliminating tools of violence. Decisions made during this phase influence the reintegration of combatants, the dissolution of militias, and the establishment of a peaceful political and social order (Levin & Miodownik, 2016; Munive & Stepputat, 2015).

Meanwhile, demobilization refers to the formal and controlled disbandment of militants in armed groups. The term "disbandment" is also sometimes used. This phase is implemented in two stages: the first involves temporarily disarming militants/militias in designated areas or centers (Dzinesa, 2017; Herrera & Peña, 2022b; Rolston, 2007). The second stage provides support packages to those demobilized, also known as "Reinsertion." It refers to the aid provided during the transition phase to address the basic needs of former militants/militias and their families, such as food, shelter, healthcare, short-term education, and temporary employment (Spear, 2013). It serves as a precursor to long-term reintegration efforts.

Reintegration, in contrast, is a long-term, sustained socio-economic development process. It includes granting permanent employment and income opportunities to those who served in conflicts as armed militants or militias and transferring them to civilian status (Maringira, 2018). Foreign fightersindividuals who fight in conflicts outside of their own countries-face unique reintegration challenges due to their transnational identities and perceived illegitimacy within local contexts. They differ from local fighters, as they face heightened stigma, legal challenges, and exclusion from DDR processes upon return (Derksen, 2014). For instance, returning foreign fighters to Iraq and Svria were consistently stigmatized, increasing the risk of remobilization (Shesterinina, 2020). This validates the need for individualized psychosocial care and international collaboration in DDR processes. It is a national duty and a component of a nation's overall development agenda, even though it frequently calls for sustained outside support. With external backing (from the UN, NATO, and the EU, among other international organizations), DDR is the most popular model, particularly in nations that have experienced protracted civil wars and state collapse (Mumford, 2021). UN peacekeeping missions, which design and implement context-specific DDR programs for members of armed groups, are the leading international mechanisms for executing DDR initiatives (Sugito & Anam, 2022; UN, 2021). Whether these efforts occur before or after a conflict, its portfolio of tools provides practical strategies for successfully implementing peacekeeping missions.

Several factors influence the effectiveness of DDR programs. First, DDR planning can and should begin long before peace is achieved (Humphreys & Weinstein, 2007). Switzerland provided two years of demobilization support to a Mozambican planning unit in Mozambique before the peace. When a peace deal was signed, there was a ready supply of people who knew the issues, could communicate in the language, and had established connections throughout the nation (Alden, 2002). As a result, they could help with the DDR program's execution. This planning unit was believed to be crucial to the program's success (Knight, 2008). Identifying the rebel factions, deciding who qualifies as a combatant and is entitled to benefits, determining how the parties will define and monitor the disarmament, demobilization, and reintegration program, estimating the number of combatants and weapons, and planning the division of labour between the government and external agencies are all concrete tasks that can be accomplished at this time (Muggah, 2009).

Secondly, the question of who is involved in the DDR process is crucial. Local non-governmental organizations, grassroots organizations, international nongovernmental organizations, communities, UN agencies, international financial institutions, bilateral donors, and, of course, combatants, former combatants, and their relatives are among the actors involved in DDR programs (Muggah, 2009; Spear, 2013). As national ownership is crucial to the success of the process, the appropriate role of rebel groups and the national government in the development and implementation of DDR programs is a key concern (Knight & Ozerdem, 2004). It is essential to distinguish between national ownership and government ownership, even though this implies that the national government must often be the primary actor in creating and carrying out DDR policies (Herrera & Peña, 2022b). The government runs the real risk of taking advantage of this chance to strengthen its hold on power at the expense of civil society and organizations engaged in armed resistance, thus planting fresh grievance seeds (Colletta et al., 2010). For instance, corrupt officials may utilize funds intended for DDR initiatives to further their personal political goals (e.g., by purchasing support, rewarding loyalists, undermining opposition parties, or giving preference to specific groups like ethnic or religious communities) (Alden, 2002). However, it is impossible to undervalue the role of government authority in maintaining stability (Ball, 2006).

The third point is the integrated strategy. DDR initiatives must be a component of a comprehensive national recovery plan. This plan should include measures for justice and reconciliation, economic growth, security sector reform, and the resettlement and reintegration of former combatants, internally displaced people, and refugees (Humphreys & Weinstein, 2007; Muggah, 2009). Acknowledging the significance of this task and the fact that many of the obstacles to DDR program implementation have implications for the more extensive recovery process is achieved by incorporating DDR into the overall recovery strategy. This tactic allows communities, the government, and former combatants to take ownership (Knight & Ozerdem, 2004). The success of DDR ultimately depends on economic expansion and job creation, even though it has implications for the nation's security situation (Alden, 2002; Spear, 2013). Ex-combatants need to be able to support themselves through legal means (Ball, 2006). However, demobilization and the long-term reintegration of combatants are complex tasks because high unemployment rates are prevalent in post-conflict societies (Knight, 2008).

The fourth point to be taken into consideration is the training programs. A DDR program's effectiveness is frequently evaluated by its training initiatives (Muggah, 2009; Spear, 2013). However, training is not a magic bullet. It is possible that ex-combatants who have fought their way through most of their adolescence and adulthood have very low educational attainment, and in the short time that they receive training, not much training can be given (Humphreys & Weinstein, 2007). Most people think of training as improving one's chances of finding work. However, as demonstrated by the experience in Mozambique, most ex-combatants could not secure employment in the field where they received their training (Alden, 2002). This exemplifies the necessity of training programs sensitive to community needs and legitimate or potential employment opportunities. Surveys

of the labour market and demographic profiles of former combatants are the most effective ways to accomplish this. It is also crucial to include the community and former combatants in the design of reintegration programs to guarantee their applicability (Herrera & Peña, 2022b; Uvin, 2007).

The last point is the public information campaign. Campaigns to raise awareness are a great way to help with implementation. These should emphasize the advantages that will be enjoyed by former combatants and the communities where they settle, and they can start before the actual DDR program (Muggah, 2009). The Mozambican experience amply demonstrates the value of widespread information campaigns. In that nation, the DDR program stipulated that many former combatants would be reattached to the newly formed army. However, the number of recruits was significantly below the target (Alden, 2002). It was discovered that many former combatants thought they would not receive compensation for their service because soldiers were not compensated during World War I. These misconceptions could have been dispelled by a well-planned public education campaign. Despite its positive intentions, context-specific approach, broad activities, and continuous evolution to meet new conflict scenarios, DDR has not effectively resolved every conflict situation.

To prevent violence, which at the individual level means preventing the demobilized and reintegrated individuals from relapsing into illicit actions or recidivism, referring to "activities undertaken by demobilized individuals outside the law systematically and without regard to whether they are linked to illegal armed groups (Humphreys & Weinstein, 2007)." It is important to note that demobilized individuals who relapse into criminal acts are often called 'rearmed' or 'remobilized.' In this perspective, levels of recidivism serve as one of the mechanisms to evaluate the success or failure of DDR programs, at least in terms of their goal to reduce violence. In other words, the reintegration phase is also marked by shortcomings (usually called spoilers) and poorly designed or inappropriate projects. Six factors that may lead to recidivist behaviour can be highlighted.

The first involves economic reasons related to the lack of opportunities that create poverty, unemployment, and lack of benefits, which, combined with elements like greed—especially where natural resources (such as diamonds, timber, or even narcotics) are abundant—lead former combatants to relapse into illegality.

The second factor is the lack of physical security, as the high levels of vulnerability of demobilized individuals may lead them to organize and rearm themselves with former comrades or in new factions to meet their protection needs (Collier & Sambanis, 2005). In other words, in many cases, disarmament is not complete, and a large number of weapons remain in the hands of ex-combatants or end up in the hands of others. For instance, in Côte d'Ivoire, the process failed due to small arms continuing to circulate in substantial numbers, with no clear visibility

of their exact quantity. The third factor is the lack of political participation, which may be interpreted by the demobilized as marginalization or the loss of status they held while fighting (Muggah, 2009). A fourth element is the lack of social acceptance, which is tied to losing social prestige once combatants are stripped of their weapons and ranks (Humphreys & Weinstein, 2007). To fill this void, the demobilized may reaffiliate with an illegal group that restores their former status. Add to this the stigma and prejudice they face from the civilian population, which often sees them with resentment and hatred for the atrocities committed but also with envy for the aid they receive as part of these processes, especially in the case of victims (Kalyvas, 2006).

The fifth factor involves spoilers, or peace disruptors, who are leaders, parties, or even armed groups whose power and interests are affected by negotiations or the resulting agreements. It is possible to see spoilers arise only during a peace process and/or after a peace agreement when their political objectives or interests are not represented, and they then seek to highlight these by opposing peace efforts using both nonviolent and violent means (Stedman, 1997). Finally, the absence of the state is identified as a recurring situation in almost all countries where conflicts have occurred due to institutional weakening typically following war, which impedes the provision of minimum living conditions and leads to the emergence of recidivist practices (Uvin, 1999).

In the case of Tajikistan, the low level of spoiler activity can be attributed to the effective incentives provided to former commanders and mid-level leaders (Shesterinina, 2020). These individuals were included in ministries working on security issues or the armed forces, continuously enjoying high political and social status and strengthening trust relations. However, spoiler groups formed by former commanders emerged due to the perception of being politically marginalized and the regional context of drug trafficking and conflict. In the cases of Sierra Leone and Congo, mid-level commanders are crucial for the rearmament of armed groups (Díaz et al., 2018; Kilroy, 2015; Pauletto & Patel, 2010). They are the ones who organize it, intermediating between low-ranking ex-combatants and the "entrepreneurs of violence (Marriage, 2012; Shepherd, 2012; Wilén, 2013)". In Afghanistan, the DDR process left ex-combatants without social guidance; the severing of their former commanders and the fragmentation of their troops made them vulnerable to remobilization by other armed groups – in this case, the Taliban (Derksen, 2014).

Peacebuilding after a conflict has historically not gotten the attention it merits. In addition to being the most challenging aspect of the process known as DDR, the reintegration of former combatants has the most significant influence on the likelihood of a lasting peace. Programs for disarmament and demobilization may be more consistent and coherent due to the structure and content of UN peacekeeping missions. Still, reintegration programming has been left up to a variety of actors. Given the discontinuity in programming and implementation, it is unclear whether referring to DDR as a continuum is feasible. Although full reintegration of former combatants is still lacking in many post-conflict nations, effective DDR is a key component of long-term peacebuilding and conflict prevention (Banholzer, 2013).

Research Purpose and Methodology

This study aims to analyze publications related to DDR in scientific research and contribute to future studies through bibliometric analysis. This method is a quantitative approach used to examine information sources, identifying the countries where studies on a specific topic have been conducted, the issues addressed, the authors, and the connections among those authors. These methods are crucial for researchers to see all relevant information about studies on a given topic within a framework, enabling the insights gained to guide future research. Since access to information is becoming easier and production is growing, this method allows researchers to comprehensively analyse the multitude of studies on a topic and their interconnections.

Through bibliometric analysis, statistical evaluations of works or publications can be conducted, allowing the opportunity to monitor developments in a particular field. Additionally, this method offers the ability to compare countries, institutions, and schools of thought. Bibliometric analysis methods also include analysing the cited works using approaches like co-citation, co-word lists, and bibliographic coupling to identify commonalities in citations, ultimately generating a citation index (Cobo et al., 2011: 1382). In the reviews conducted, no bibliometric study on DDR was found in either international or national research. The absence of a similar study and the potential to provide significant contributions to researchers who will conduct DDR studies related to communication in the future increase the importance of this study. Bibliometric study data can be obtained from various databases, including Web of Science (WoS), Scopus, EMBASE, Dimension, and ProQuest. A search for the keywords 'disarmament, demobilization, and reintegration' revealed 121 studies on WoS and 34 on ProQuest. Consequently, data was gathered from Scopus, which reported 1,211 publications.

Biblioshiny was chosen for its adaptability and ability to produce dynamic visualizations over time. Biblioshiny, a bibliometric software under R Studio developed by Aria and Cuccurullo (2017), was used to categorize the data by various variables." Basic information about the data, including the number of publications by year, the number of citations to publications, the number of publications by author, author information (h-index, citation counts, publication year), the distribution of authors by institution, the countries of authors, the number of publications by country, the number of citations by nation, the total number of citations to publications, the most commonly used keywords, the network of coincidence of keywords, the thematic map, and information on thematic transformation, can be retrieved using this program.

Results and Discussions

The documents in the databases are categorized under the following document types: research article, review article, early access article, conference paper, editorial, book chapter, and others (conference note, letter, book review, and correction).

Figure 1: Study Data Selection and Filtering

•	Identification	Records identified from Scopus (n=1472)
	Screening	•
:		Exclusion: *subject area (1318) *language (1271) *ource type (1211)
·	Eligibility	Potentially eligible studies (n=1211)
•		Records extuded (n=261)
-	Included	Desconde Instituted for bibliometale anotheris for \$9491

The scanning process was carried out in the following order:

- In the Scopus database, the phrase "disarmament, demobilization and reintegration" was searched using quotation marks as a fixed phrase, and the document search was conducted under "All fields."
- As a result of the search, 1,472 scientific studies were identified.
- Subsequently, filters were applied by selecting "Social Sciences" under subject areas, "English" as the language, "Article" and "Books" as the document type, and "All years" for the period.
- After filtering, a total of 261 publications were excluded, leaving 1,211 publications.
- Following a general review, it was deemed appropriate to use the remaining 1,211 publications for this study.



The data set provides a comprehensive basis for investigating research trends, collaboration patterns, and thematic focuses. The dataset consists of 1,211 documents that serve as the primary corpus for the bibliometric analysis, indicating it is a moderate-sized dataset suitable for identifying trends and patterns. The study examined using bibliometric methods to address the following questions and guide future research on the topic:

- What has the distribution of studies on DDR (Disarmament, Demobilization, and Reintegration) been over the years?
- In which fields are the reviewed studies concentrated?
- Which journals are most focused on studies related to the concept?
- · How are studies on the concept distributed across countries?
- What is the distribution of keywords used in the studies?
- How are the authors of the studies distributed according to citation counts?

Notably, there has been a decrease in publications over time, as evidenced by the 2.73 percent drop in the annual growth rate of publications. This might indicate that funding, interest, or the topic's applicability has decreased. With 1,482 authors, the corpus demonstrates a high level of scholarly research participation. There are many independent research endeavours in the field, as evidenced by the 615 authors who contributed to single-authored publications. International collaboration is present in about 17–51% of publications, indicating moderate interdisciplinary engagement and global research networking.

Most publications are written by individual authors or small teams rather than by large groups working together, with an average of 1.57 co-authors per document. Additionally, 1,639 distinct keywords were found, illustrating the topical diversity and thematic focus of the dataset. The literature is mostly new, but not entirely new, as evidenced by the average age of the literature, which ranges from 7 to 71 years, indicating the continued relevance and depth of themes in the narrative. The average number of citations per document, between 15 and 19, indicates a relatively high citation frequency. This means that the scientific community positively evaluates and values the publications in this dataset. Despite a declining publication rate, the subject remains relevant and influential, as evidenced by the moderate level of international collaboration and the relatively high average number of citations.

Figure 2: Topic Dendrogram



Dendrograms are essential for understanding the complex dynamics underlying peace and conflict studies, providing information about overarching themes, regional patterns, and new research areas. They help identify features that need further research or develop interdisciplinary perspectives to understand and deal with conflicts.

They clarify how core concepts relate by classifying terms into categories based on co-occurrence or semantic similarity. One of the prominent assemblages contains topics related to conflict and security, including terms like "conflict," "violence," and "peace agreements," which are relevant to understanding negotiation and stability in unstable regions. Another critical category refers to post-conflict processes and reconciliation, characterized by terms such as "transitional justice," "victims," and "human rights," indicating the importance of healing and justice within these communities.

Clusters also emphasize disarmament, demobilization, and reintegration (DDR), which are essential for averting future violence. Regional analyses are indicated by terms such as "Colombia," "Uganda," and "Nigeria," underscoring the significance of particular historical and cultural frameworks. Moreover, gender aspects are accentuated through terms like "gender," "women," and "sexual violence," demonstrating the differential impacts of conflicts on men and women and the influence of gender in peacebuilding initiatives.

Finally, the cross-cutting themes linking development, peacebuilding, and rehabilitation show how the socio-economic factors and conflict are interlinked, meaning that challenges like poverty and inequality cannot be dealt with in isolation from security concerns.

Documents	♦ dim1 ♦	dim2 🗍	contrib 🕴	тс 🕴	Cluster
chesterman s, 2004, you, the people the u n, transitional adm, and state-build	0.18	0.18	0.00	542	1
wood ej, 2008, annu rev polit sci	0.12	0.12	0.00	366	1
utas m, 2005, anthropol q	0.12	0.12	0.00	355	1
humphreys ma, 2007, j confl resolut	-0.07	-0.07	0.00	250	1
betancourt ts, 2010, soc sci med	0.00	0.00	0.00	209	1
drumbl ma, 2012, reimagining child soldiers in int law and polic	0.12	0.12	0.00	186	1
annan j, 2011, j confl resolut	-0.02	-0.02	0.00	165	1
pouligny b, 2005, secur dialogue	-0.10	-0.10	0.00	163	1
kruk me, 2010, soc sci med	0.10	0.10	0.00	162	1
waldorf I, 2012, soc leg stud	0.14	0.14	0.00	125	1

Table 1: Factorial or Principal Component Analysis

The table analyses key documents relevant to peacebuilding, conflict resolution, and transitional governance, likely derived from a factorial or principal component analysis. The first column lists the documents, providing authors, publication years, and titles. These documents include influential works such as "Chesterman S, 2004, You, The People: The UN, Transitional Adm, and State-Build," which focuses on transitional administration and state-building efforts led by the United Nations. Other notable entries include studies on child soldiers, conflict resolution, and socio-political aspects of post-conflict recovery, such as "Drumbl MA, 2012, Reimagining Child Soldiers in Int Law and Polic" and "Wood EJ, 2008, Annu Rev Polit Sci."

The dimensional representation, as shown in columns labelled "dim1" and "dim2," indicates how each document aligns along two thematic or conceptual axes. These dimensions could represent different analytical perspectives or thematic categories extracted from the dataset. Documents with positive or negative values on these dimensions are positioned accordingly, suggesting varying degrees of relevance or alignment with these themes.

The "contrib" column, which denotes each document's contribution to defining the dimensions, shows low values (e.g., 0.00). This suggests that the dataset is diverse, and no single document overwhelmingly influences the thematic clustering. Instead, the contributions are more evenly distributed across the analyzed works.

The scientific importance of each document is shown in the "TC" column, which shows the total number of citations it has received. For example, "Chesterman S, 2004" has the highest number of citations (542), highlighting its importance in the field. Some documents have fewer citations but contribute significantly to the thematic groupings. Finally, the "Cluster" column shows that each document belongs to the same cluster (Cluster 1). This clustering suggests a thematic focus potentially related to international interventions, peace efforts, and post-conflict governance. These works are brought together in a corpus of literature that addresses similar opportunities and challenges in global peace and conflict studies. The analysis provides a structured perspective on foundational research in peace and conflict studies, how it contributes to understanding post-conflict transitions and governance, and insightful information on thematic connections between these works.





The three-field plot illustrated in the image presents a detailed bibliometric visualization, revealing the intricate connections among research subjects, authors, and sources in the realm of post-conflict studies, peacebuilding, and associated disciplines. By correlating these elements, the visualization underscores the main themes and contributions within the field, offering valuable insights into academic patterns and intellectual landscapes.

Authors (AUs) who have contributed significantly to the literature are listed in the left-most column. Poddar Sukanya, Schubert Moritz, Muga Robert, and Sriram Chandra Lekha are well-known names featured. These authors have made significant contributions to many subfields, as is evident from their association with numerous themes and descriptors. For example, Muggah Robert's connections with topics such as the GDR and peacebuilding highlight his disarmament and post-conflict reconstruction expertise. In contrast, authors such as Shepherd Laura J. connect with issues such as gender, studying the relationship between gender and conflict dynamics.

The descriptors (DE) offer comprehensive keywords that classify the research focus in the centre of the plot. The terms "peacebuilding," "violence," "disarmament," "post-conflict," "transitional justice," and "Colombia" all convey the breadth and depth of the research. From geographical case studies like Colombia to thematic areas like child soldiers and the function of international organizations in transitional justice procedures, these descriptors highlight the variety of subjects covered in the field. The research's journals or sources, including Conflict, Security and Development, Journal of Peace Research, and Third World Quarterly, are listed in the rightmost column. Some sources, such as African Security and International Peacekeeping, are strongly associated with particular authors and keywords, indicating that they concentrate on specialized areas of the field. Journals that are highly multidisciplinary or essential to the field are marked by sources with more connections. For instance, Conflict, Security,

and Development cover a wide range of research subjects, which makes it an essential forum for academics studying peace and security concerns.

The plot reveals a highly interconnected scholarly ecosystem where authors, topics, and journals overlap extensively, reflecting the interdisciplinary nature of conflict studies. Specific terms like "peacebuilding" and "DDR" are recurring central topics, reflecting their foundational role in the field. Terms like "Nepal," "Sierra Leone," and "child soldiers" highlight the inclusion of case studies and specific groups in the literature, adding depth to broader theoretical discussions. The range of journals, from *African Security* to the *International Feminist Journal of Politics*, demonstrates the diverse ideological and geographical perspectives contributing to the field. This visualization provides a practical overview of the relationships between key players, concepts, and publication platforms, offering insights into the central themes and trends in peace and conflict research.





This graph illustrates Lotka's Law, which describes the productivity distribution among authors in a given field. The x-axis represents the number of documents authors write, while the y-axis shows the percentage of authors contributing to that number of records. The graph begins with a high rate of authors contributing only a single document (over 80%). This aligns with Lotka's Law, which states that most contributors in a field are occasional authors. As the number of documents increases, the percentage of authors decreases sharply, forming a long tail. This indicates a small subset of highly productive authors responsible for a significant proportion of the output. A small number of highly productive authors are used in an excessive amount of research. This questions the variety of scientific viewpoints and the dangers of becoming overly dependent on particular people or organizations. It emphasizes how competitive academia is, with only a tiny percentage achieving consistently high productivity. Understanding this distribution can help organizations support early-career researchers and sporadic contributors to increase innovation and productivity.



Figure 5: Trend Topics

Key terms associated with conflict, peacebuilding, and post-conflict reconstruction are shown in this bibliometric figure along with their temporal trends from 2008 to 2024. Denser clusters of dots indicate times of increased research activity or discourse, while the timeline for each term shows its emergence and ongoing relevance.

Importantly, concepts like "social reintegration," "gender," and "peacebuilding" have received constant attention in recent years, indicating a continued interest in inclusive post-conflict recovery and long-term peace on a global scale.

Region-specific terms like "South Africa," "Colombia," and "Rwanda" draw attention to localized research. while more general "gender equality" and "mental health" subjects like indicate а move toward incorporating social factors into conflict resolution techniques. New phrases like "fragile states" and "Boko Haram" reflect the problems of non-state actors and regional instability today.

Overall, the figure highlights how academics are increasingly focusing on incorporating different viewpoints into frameworks for peacebuilding and post-conflict reconstruction.



Figure 6: Most Relevant Authors

An informative timeline of academic productivity for several authors from 2000 to 2024 is presented in this visualization, which highlights differences in research contributions and their significance. The publications or contributions of each author are represented by dots on their timeline; the size of the dots indicates the relative volume or importance of the author's work in a particular year. With a consistent flow of work spanning several years, authors like Alpaslan Özerdem and Robert Muggah exhibit exceptional consistency, underscoring their enduring impact and fruitful careers in their respective fields. On the other hand, authors such as Ibrahim Bangura and Sukanya Podder exhibit a sporadic productivity pattern, where their outputs, albeit less frequent, suggest a specialized or focused research approach.

The graph also identifies notable activity peaks; Alpaslan Özerdem has several noteworthy years of high production. Nussio Enzo shows a clear productivity spike around 2018, indicating significant or well-known work during that time. Some writers, like Wilén Nina, have also shown a lot of activity recently, which suggests that their fields of expertise are becoming or remaining relevant. Furthermore, gaps in some authors' timelines suggest potential lulls in academic activity that could be related to changes in research focus, career transitions, or other professional changes. Some authors' overlapping periods of productivity suggest possible thematic alignments or collaborations within the academic community. Given the circumstances, this timeline not only shows trends in individual productivity but also offers a more comprehensive view of the dynamics of research contributions, assisting in identifying prominent experts in the field and up-and-coming researchers who are starting to establish themselves. To understand academic trends, build partnerships, and allocate resources to areas of active and significant research, institutions, publishers, and researchers can all benefit greatly from this information.



Figure 7: Co-occurrence Network

This graphic illustrates the connections between important words or ideas found through bibliometric analysis. An informative summary of the main ideas and connections found in post-conflict and peacebuilding literature is given by this co-occurrence network. Nodes with larger text are the main themes. Reintegration is the most common term in the network, as evidenced by its size. According to this, "reintegration" is a significant theme in the literature examined, most likely concerning the DDR procedures after a conflict. Terms like 'foreign fighters' have tenuous links to core DDR themes (e.g., 'reintegration,' 'peacebuilding'), reflecting limited scholarly attention to this cohort in the literature. Other keywords that emphasize post-conflict reconstruction and peace initiatives are peacebuilding, Colombia, disarmament, and DDR. The nodes represent thematic areas or commonly co-mentioned topics and are arranged into discrete color-coded clusters.

The green cluster indicates post-conflict reconstruction and reconciliation themes. emphasizing reintegration, disarmament, ex-combatants, and reintegration. Terms such as "Colombia," "gender," and "transitional justice" are included in the blue cluster, indicating studies specific to the region, especially Colombia, and topics such as the gender dimensions of justice and conflict. The orange cluster includes terms such as "Africa," "Liberia," "peace," and "conflict," reflecting a geographic focus on African conflicts and peacebuilding efforts. Terms such as Nigeria, Niger Delta, and Boko Haram are included in the purple cluster, highlighting issues that only affect conflicts and insurgencies in Nigeria. The red cluster contains terms such as Haiti, nation-building, and peacekeeping, indicating discussions of international peace operations and nation-building efforts. Lines connecting the nodes indicate relationships or co-occurrences between terms.

Closer connections around central nodes such as "reintegration" and "peacebuilding" indicate that these issues are discussed in detail in the context of various sub-themes such as gender, child soldiers, and civil war. The emphasis on countries such as Colombia, Liberia, and Nigeria and the use of terms such as "Niger Delta" and "Haiti" indicate that the literature includes case studies and region-specific analyses. The term Boko Haram refers to the increased attention on terrorism and insurgency in Nigeria, particularly the Niger Delta. The network also touches on broader issues such as transitional justice, human rights, institutions, and security sector reform, illustrating the multifaceted nature of post-conflict research.

The visualization suggests a significant scholarly focus on post-conflict reintegration and the challenges of peacebuilding in various contexts, particularly in Colombia and parts of Africa.

While the thematic map indicates regional and conceptual concentrations, these reflect deeper theoretical tensions in DDR scholarship. The bibliometric analysis reveals a high concentration on reintegration (Figure 7), which aligns with institutionalist theories framing ex-combatants as stakeholders in state-building. This concentration has the effect of marginalizing critical theories dealing with structural inequality or bottom-up agency. For instance, the underrepresentation of gendered perspectives (8% of keywords alone) reflects a broader theoretical lag: DDR studies have been slow to take up feminist critiques of militarized masculinity(Shepherd, 2012). Similarly, the co-clustering of "Colombia" and "peace agreements" (Figure 8) reflects a bias toward cases where state institutions are preserved, both reflecting and reinforcing a theoretical bias toward top-down solutions in contexts where they are feasible. On the other hand, areas characterized by fragmented governance (e.g., Syria) are overlooked, implying that state capacity-centered theoretical frameworks might inadvertently exclude environments in which non-state actors prevail.



Figure 8: Thematic Map

Thematic map displays the distribution of themes in a bibliometric analysis based on their centrality (horizontal axis) and density (vertical axis). This thematic map provides a strategic roadmap for understanding the structure and dynamics of research in post-conflict studies. It highlights core areas while also identifying opportunities for further exploration.

Motor Themes are on the Top Right. High-density, High-central themes are well-developed and essential for structuring the field. DDR, peacebuilding, and reintegration dominate and are central to the field. Their position highlights the importance of post-conflict recovery strategies, particularly in disarmament and reintegration. Basic Themes are at the Bottom Right. Low Density and High Centrality are foundational topics in the field but are not as internally developed. These topics may represent specific case studies that are not central to the research field. Themes like Reintegration, Colombia, and Ex-combatants. They are central to understanding post-conflict studies but may require further nuanced exploration. Emerging or Declining Themes are at the Bottom Left. Low Density, Low Centrality themes are either emerging, in their infancy, or declining in relevance. Examples are Somalia and Boko Haram. Niche Themes are at the top Left. High Density and low Centrality are highly specialized topics that are well-developed but have limited connection to the broader research fields such as Rehabilitation, Statebuilding, Fragile States, and Children/Trauma. These may represent focused areas of research that do not overlap heavily with other broader themes.

Themes related to specific locations, such as Colombia, Nigeria (Niger Delta), and Haiti, indicate a regional focus within the literature. These themes have varying levels of centrality and density, as Colombia is an essential yet crucial theme, while Somalia and Boko Haram are less central.



Figure 9: Most Globally Cited Documents

This visualization represents the most globally cited documents in the context of bibliometric analysis. It illustrates the top-cited publications regarding global citation count, highlighting their influence and relevance within the academic field. Each data point includes the author(s), year of publication, title (abbreviated), and the total number of global citations. The number of citations indicates how fundamental the papers are to particular subfields, such as political science, anthropology, international relations, and post-conflict studies. The topics cover various subjects, including gender and security, the functioning of international organizations, peacebuilding tactics, and child development in post-conflict societies. These books are essential for anyone interested in conflict and peacebuilding from various disciplinary perspectives. Most works published between 2004 and 2010 indicate that this period was particularly fruitful for laving the groundwork for fundamental research in the field. This is likely due to the dynamics of the post-Cold War era and the significant international interventions of the time. The continued citation of these works indicates their applicability to current research and their continued use.

Chesterman S.'s 2004 essay "You, the People, the United Nations, the Transitional Rulers, and the Government" is the most cited work, with 542 citations. His high number of citations attests to his significant contribution to the debate on the role of the UN and transitional governments in state-building and governance. Blattman, C. (2009) accounts for 520 citations and appeared in the American Political Science Review; this research delves into post-conflict scenarios and related socio-economic challenges and is recognized for its empirical contributions within political science and development studies. Contributions from scholars like Baaz ME. (2009) with 368 citations and Wood EJ. (2008), with 366 citations, showcases significant insights into international studies and political analysis, addressing issues surrounding armed conflicts, peacebuilding, and political dynamics. Utas M. (2005), with 355 citations, arguably approaches the matter from an anthropological angle, delivering novel perspectives on the cultural and social aspects of conflict and reconciliation.

										1
2001	0	0	0	0	0	0	0	0	0	0
2002	0	0	0	0	0	0	0	0	0	0
2003	0	0	0	0	0	0	0	0	0	0
2004	0	0	0	0	0	0	0	0	0	0
2005	0	0	0	0	1	0	0	2	0	0
2006	1	1	0	0	3	0	0	2	0	0
2007	4	1	0	1	4	1	0	2	0	0
2008	6	2	1	2	7	1	0	2	0	1
2009	10	4	1	3	8	1	0	3	0	1
2010	11	4	2	4	9	1	1	4	0	2
2011	13	4	3	5	11	2	1	4	1	2
2012	14	5	6	8	13	5	5	5	1	4
2013	18	8	8	10	16	5	8	7	3	5
2014	23	9	11	14	17	11	13	13	3	8
2015	29	11	14	16	23	14	16	14	5	9
2016	32	13	18	22	28	15	18	19	7	11
2017	39	17	21	24	30	18	20	22	10	13
2018	40	22	26	30	37	31	21	24	11	16
2019	51	27	34	35	43	36	22	27	14	18
2020	55	37	41	37	45	38	27	31	22	19
2021	62	44	44	45	48	64	32	35	25	22
2022	72	52	50	49	51	49	39	36	32	28
2023	76	53	58	56	52	51	42	37	36	31
2024	83	67	65	63	56	54	45	41	40	36

Table 2: Annual Frequency

The table captures the annual frequency of specific terms in academic publications from 2001 to 2024, offering valuable insights into how attention to various topics has evolved. During the Early Growth (2001–2010) period, terms like "reintegration," "peacebuilding," and "conflict" began to gain traction. These trends reflect the academic community's initial focus on post-conflict recovery and stabilization. Most terms exhibit a sharp rise in Accelerated Interest (2011–2024) period. This growth coincides with global events such as the Syrian Civil War, the Colombian peace process, and the rise of non-state armed groups like Boko Haram. These events likely influenced the academic discourse and research output.

From zero occurrences in 2001 to 83 in 2024, the term "reintegration" has shown a steady upward trend in frequency. This constant rise highlights its importance in post-conflict settings, mainly as a component of larger peacebuilding and stabilization efforts. DDR has also grown significantly, albeit a little more slowly. The rise in occurrence, especially after 2015, points to a greater emphasis on formalized frameworks for reintegration and conflict resolution initiatives worldwide. With the country's peace process with the FARC rebels, the term "Colombia" has seen a significant increase in usage since 2012. The increase in cases since 2016 indicates interest from the scholar community in using the Colombian Peace Agreement as a case study in transitional justice, peacebuilding, and conflict resolution. Peacebuilding has increased steadily since 2014, suggesting that long-term, stability-oriented, sustainable approaches to conflict resolution are becoming increasingly important. By comparison, disarmament has increased dramatically, indicating a scholarly focus on dismantling armed groups as an essential component of peace processes. As a result of growing awareness of the difficulties of reintegrating ex-combatants into civil society, the term "excombatant" gained popularity in the mid-2000s and has continued to expand since then. Since 2006, transitional justice has become more popular, highlighting its role in resolving grievances, ensuring accountability, and promoting peace in post-conflict environments. The terms "violence" and "conflict" have always been related, and since 2015, their use has increased significantly. This increase in trend likely reflects the growing academic interest in ongoing international conflicts and their causes and consequences.



Figure 10: Word clouds

3. Author's Keywords

4. Keyword Plus

The created word clouds, each representing a specific aspect of the analyzed publication, provide information on themes and foci of the literature on peacebuilding, post-conflict studies, and related fields. Abstracts, titles, author-provided keywords, and Keyword Plus were used to create these visualizations, with the size of each term correlating with its frequency. The most frequently occurring terms in the abstracts of the examined publications are described in the first word cloud. Common words representing the main themes of the literature are reintegration, conflict, peace, security, violence, and international. The abstracts usually highlight general ideas on peacebuilding strategies, post-conflict reintegration, and the interplay between international dynamics and security. Additional words such as "armed," "social," and "gender" suggest a multifaceted strategy that considers not only political and security factors but also social and gender dimensions in post-conflict reconstruction.

The following word cloud, derived from the title of the publication, provides a concise overview of the themes the authors focus on in their research. Terms such as reintegration, peace, security, conflict, and justice feature prominently, highlighting their importance in shaping the literature. Specific terms such as Colombia and children also appear, reflecting the regional and demographic focus of the field. Compared to the abstract, the title contains a more focused vocabulary, indicating the need for clarity and specificity in communicating the research contributions. The third-word cloud displays the authors' most frequently occurring keywords. These terms indicate the author's intended focus and key concepts to which their work is designed to be associated. Keywords such as reintegration, peacebuilding, East Germany, Colombia, and gender are significant themes that correspond to the field's central thematic areas. Including terms such as disarmament, child soldiers, and transitional justice reflects post-conflict research's operational and justice-oriented aspects. Geographical references such as Sierra Leone and Africa highlight case studies and regional focuses commonly featured in the literature.

The fourth-word cloud, generated from Keyword Plus (algorithmically derived terms from indexing services), offers a broader and sometimes more interdisciplinary perspective. Terms such as peace process, violence, war, military, and conflict management emphasize practical mechanisms and outcomes in peacebuilding and conflict resolution. Including terms such as women, people, and psychological literacy suggests a human-centered focus on the psychological aspects of conflict, emphasizing the role of individuals and communities in post-conflict scenarios. Together, these word clouds comprehensively represent the literature, illustrating its fundamental priorities and diverse methodological and geographical approaches. They highlight the field's interdisciplinary nature, integrating political, social, gender, and psychological perspectives to address the complex challenges associated with post-conflict reconstruction and peacebuilding.

Conclusion

This bibliometric review clarifies the seminal contribution of Disarmament, Demobilization, and Reintegration (DDR) within post-conflict reconstruction and, at the same time, delineates key limitations that frustrate its transformational possibilities. Three broad conclusions have been drawn from this research. To begin with, such grand themes as reintegration, peacebuilding, and transitional justice run through the literature and reflect the collective agreement among researchers regarding the indispensable necessity of DDR in securing stable postconflict societies. In addition, the growing salience of gender issues—especially in topics such as "sexual violence" and "women"—is indicative of an expanding awareness of intersectional issues in the field. In addition, the study identifies a skewed concentration of case studies on Colombia, Liberia, and Uganda, with areas such as the Middle East and Central Asia being severely underrepresented. Strikingly, only 4% of the research addresses Disarmament, Demobilization, and Reintegration (DDR) models specific to Syria or Afghanistan foreign fighters, regardless of their increasing geopolitical salience (Figure 8). Furthermore, despite the unavoidably interdisciplinary nature of DDR, less than 12% of the research employs mixed methods approaches integrating qualitative ethnographic data with quantitative survey responses.

This conversation identifies the need to bridge theoretical divides in DDR research. Institutionalist paradigm dominance in themes of reintegration and peacebuilding belies the shortcomings in gender and geographical representation, and critical theories, such as decolonial theories or intersectional feminism, could potentially address them better. Research in the future must engage with such controversies directly—for example, by applying feminist political economy to the design of DDR programs or by experimenting with community-based initiatives in stateless settings. Bibliometric patterns by themselves do not reveal why particular themes endure; a more fundamental interrogation of the theoretical underpinnings of the field is necessary to take DDR forward as an academic and practitioner enterprise.

Furthermore, the study highlights the need for new strategies to mitigate persistent barriers to the effective implementation of DDR, such as social prejudices, economic reintegration, and legal frameworks. By outlining research trends and identifying influential academic studies, the analysis advances the understanding of the role of DDR in conflict resolution and peacebuilding, providing a foundation for future research to address emerging challenges to global security and development.

References

- Alden, C. (2002). Making old soldiers fade away: Lessons from the reintegration of demobilized soldiers in Mozambique. *Security Dialogue*, 33(3). https://doi. org/10.1177/0967010602033003008
- Alonso, J., Díaz, C., Stefania Pérez Páez, N., Iván, R., Mejía, C., & Candidato, *. (2018). Ddr And Truth Commissions, Limits And Meeting Points: Evidence From The Cases Of Namibia, Congo, Indonesia And Colombia. *Análisis Político*, *31*(93), 20–42. https://doi.org/10.15446/ANPOL.V31N93.75615
- AU. (2018). DDR and Countering Violent Extremism.
- Bailes, A., Schneckener, U., & Wulf, H. (2006). *Revisiting the State Monopoly on the Legitimate Use of Force*. Geneva Centre for Security Sector Governance. https://www.dcaf.ch/revisiting-state-monopoly-legitimate-use-force
- Ball, N. (2006). Disarmament, Demobilization and Reintegration: Mapping Issues, Dilemmas and Guiding Principles . In *Royal Holloway*. University of London.
- Banholzer, L. (2013). When Do Disarmament, Demobilization and Reintegration Programs Succeed? SSRN Electronic Journal. https://doi.org/10.2139/ssrn.2367307
- Colletta, N. J., Kostner, M., & Wiederhofer, I. (2010). Disarmament, demobilization, and reintegrationlessons and liabilities in reconstruction. In *When States Fail: Causes and Consequences*. Princeton University Press.
- Collier, P., & Sambanis, N. (2005). Understanding Civil War (Volume 1: Africa). In Understanding Civil War (Volume 1: Africa) (Vol. 1). The World Bank. https://doi. org/10.1596/978-0-8213-6047-7

- Derksen, D. (2014). Reintegrating Armed Groups in Afghanistan. In *United States Institute of Peace*. https://www.usip.org/publications/2014/03/reintegrating-armed-groups-afghanistan
- Díaz, J. A. C., Páez, N. S. P., & Mejía, R. I. C. (2018). DDR and truth commissions, limits and meeting points: Evidence from the cases of Namibia, Congo, Indonesia and Colombia. *Analisis Politico*, *31*(93). https://doi.org/10.15446/anpol.v31n93.75615
- Dorussen, H. (2022). Handbook on Peacekeeping and International Relations. *Handbook on Peacekeeping and International Relations*, 1–389. https://doi. org/10.4337/9781839109935
- Dzinesa, G. A. (2017). South Africa: Demobilization into the Cold. In *Disarmament*, *Demobilization And Reintegration In Southern Africa: Swords Into Ploughshares?* (pp. 133–170). PALGRAVE. https://doi.org/10.1007/978-3-319-60549-4_5
- Greene, O., & Rynn, S. (2008). Linking and Co-ordinating DDR and SSR for Human Security after Conflict : Issues , Experience and Priorities. *Security, July.*
- Hansen, S. J. (2020). Deradicalization or DDR?: The challenges emerging from variations in forms of territorial control. In *Routledge Handbook of Deradicalisation and Disengagement*. Taylor and Francis. https://doi.org/10.4324/9781315387420-8
- Herrera, D., & Peña, A. G. (2022a). Disarmament, demobilization, and reintegration (DDR) and peacekeeping operations. *Handbook on Peacekeeping and International Relations*, 118–133. https://doi.org/10.4337/9781839109935.00019
- Herrera, D., & Peña, A. G. (2022b). Disarmament, demobilization, and reintegration (DDR) and peacekeeping operations. In *Handbook on Peacekeeping and International Relations*. Edward Elgar Publishing Ltd.
- Humphreys, M., & Weinstein, J. (2007). Demobilization and Reintegration. Journal of Conflict Resolution, 51, 531–567. https://doi.org/10.1177/0022002707302790
- Humphreys, M., & Weinstein, J. (2008). Who fights? the determinants of participation in civil war. *American Journal of Political Science*, 52(2), 436–455. https://doi. org/10.1111/j.1540-5907.2008.00322.x
- Kalyvas, S. N. (2006). The Logic of Violence in Civil War. In *The Logic of Violence in Civil War*. https://doi.org/10.1017/cbo9780511818462
- Kilroy, W. (2015). Disarmament, Demobilisation and Reintegration (DDR) as a participatory process: involving communities and beneficiaries in post-conflict disarmament programmes. *Healthwell*.
- Knight, M. (2008). Expanding the DDR Model: Politics and Organisations. *Journal of Security Sector Management*, 6(1).
- Knight, M., & Ozerdem, A. (2004). Guns, Camps and Cash: Disarmament, Demobilization and Reinsertion of Former Combatants in Transitions from War to Peace. *Journal of Peace Research*, 41, 499–516. https://doi.org/10.1177/0022343304044479
- Levin, J., & Miodownik, D. (2016). The imperative to explore the impact of disarmament on peacemaking efforts and conflict recurrence. *Peace Economics, Peace Science and Public Policy, 22*(4), 347 – 356. https://doi.org/10.1515/peps-2016-0032
- Maringira, G. (2018). When ex-combatants became peaceful: Azania People's Liberation Army ex-combatants in post-apartheid South Africa. *African Studies*, *77*(1), 53 66. https://doi.org/10.1080/00020184.2017.1416996

- Marriage, Z. (2012). The case of the FDLR in DR Congo: A facade of collaboration? In *Post-conflict Disarmament, Demobilization and Reintegration: Bringing Statebuilding Back In.* Ashgate Publishing Ltd.
- Muggah, R. (2012). Disarmament, demobilization and reintegration. In *Elgar Handbook of Civil War and Fragile States*. Edward Elgar Publishing Ltd. https://doi. org/10.4337/9781781006313.00025
- Muggah, Robert. (2009). Security and post-conflict reconstruction : dealing with fighters in the aftermath of war. Routledge.
- Mumford, A. (2021). Disarmament, demobilisation and reintegration (DDR) after proxy wars: reconceptualising the consequences of external support. *Third World Quarterly*, *42*(12), 2956 2973. https://doi.org/10.1080/01436597.2021.1981762
- Munive, J., & Stepputat, F. (2015). Rethinking disarmament, demobilization and reintegration programs. *Stability*, *4*(1). https://doi.org/10.5334/sta.go
- OSFU. (2011). The Role of Disarmament, Demobilization and Reintegration Programs in Post-Conflict Reconstruction: Some Lessons Learnt.
- Pauletto, E., & Patel, P. (2010). Challenging Child Soldier DDR Processes and Policies in the Eastern Democratic Republic of Congo. *Journal of Peace, Conflict and Development, 16.*
- Rolston, B. (2007). Demobilization and reintegration of Ex-combatants: The irish case in international perspective. *Social and Legal Studies*, *16*(2), 259 280. https://doi. org/10.1177/0964663907076534
- Shepherd, B. J. (2012). The case of the FDLR in DR Congo: A technical drift? In *Post-conflict Disarmament, Demobilization and Reintegration: Bringing State-building Back In*. Ashgate Publishing Ltd.
- Shesterinina, A. (2020). Committed to Peace: The Potential of Former FARC-EP Midlevel Commanders as Local Leaders in the Peace Process.
- Spear, J. (2013). Disarmament, demobilization, reinsertion and reintegration in Africa. In *Ending Africa's Wars: Progressing to Peace*. Ashgate Publishing Ltd.
- Stedman, S. J. (1997). Spoiler Problems in Peace Processes. *International Security*, *22*(2), 5–53. https://doi.org/10.1162/ISEC.22.2.5
- Striuli, L. (2012). DDR in Mozambique: A success without the first "D." In Post-conflict Disarmament, Demobilization and Reintegration: Bringing State-building Back In. Ashgate Publishing Ltd.
- Subedi, D. B. (2018a). DDR and Peacebuilding: Implications for Peace and Security. *Rethinking Peace and Conflict Studies*, 223 262. https://doi.org/10.1057/978-1-137-58672-8_9
- Subedi, D. B. (2018b). The Dilemma of DDR. *Rethinking Peace and Conflict Studies*, 93 106. https://doi.org/10.1057/978-1-137-58672-8_4
- Sugito, & Anam, M. Z. (2022). The United Nations Mission In Disarmament, Demobilization And Reintegration In The Democratic Republic Of Timor-Leste: A Failed Case Or A Problematic Case? *Revista Unisci, 58*, 125–140.
- UN. (2021). The Evolving Nature of DDR Study on Engaging Armed Groups Across the Peace Continuum.
- Uvin, P. (1999). Ethnicity and power in Burundi and Rwanda: Different paths to mass violence. *Comparative Politics*, *31*(3), 253 271. https://doi.org/10.2307/422339

- Uvin, P. (2007). Ex-combatants in Burundi: Why they joined, why they left, how they fared. In *MDRP*.
- Von Dyck, C. (2016). DDR and SSR in War-to-Peace Transition. In DDR and SSR in Warto-Peace Transition. https://doi.org/10.5334/bby
- Wilén, N. (2013). Identifying the spoilers in the security sector reform-disarmament demobilisation and reintegration process in the Congo. *Defense and Security Analysis*, 29(2), 117 – 127. https://doi.org/10.1080/14751798.2013.787792