



Dependency and neocolonialism in international research collaboration: evidence from a Ghanaian elite university

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Abstract

Scientific collaboration between the Global North and South has expanded significantly over the last three decades. However, this expansion has yet to bring about equal international research collaborations (IRC) for all collaborating sides. Through a case study of a Ghanaian elite university, this study examines how these inequalities manifest in the IRC of Ghanaian higher education researchers, building on the theoretical lenses of neocolonialism and academic dependency. It collected data from the university's researchers and administrators and national policymakers through in-depth interviews. Ghanaian higher education system is uniquely located in West Africa as one of the few English-speaking colonised countries. Its growing involvement in global research makes it an interesting case to explore the manifestations of neocolonialism and dependency in IRC. The findings suggest how colonial structures continue to play out in the IRC dynamics. Findings also reveal how academic dependency resulting from external and internal factors impacts IRC in the context of Ghana and how such dependency has reflected and moved beyond colonial legacies. We propose that collaborative and targeted policies should aim for a gradual road towards breaking the dependency, where the Global North is positioned to have the upper hand. A more equally grounded research collaboration is important for Ghanaian and overall African higher education.

Keywords International research collaboration · Neocolonialism · Academic dependency · Ghana · Africa · Global research system

Introduction

Over the last 30 years, research collaboration between the Global North and South has grown through technical assistance and joint research partnerships (Gaillard, 1994). International research collaboration (IRC) occurs when researchers from different

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countries work together to conduct and publish research studies. Despite its growth, the North–South divide in IRC perpetuates structural inequalities due to academic neocolonialism and dependency. Today, academic neocolonialism may be sustained by the realities of academic dependency in IRC. In many respects, developing world researchers and intellectuals depend on Western scientific research, giving the West authority and influence over scientific research in most developing worlds (Alatas, 2003).

Scientific dependency and neocolonialism involve knowledge extraction and export as compared to the fertilisation of indigenous development and the systematic use of Global South scientists as ‘implementors of research designs or purveyors of unique datasets’ (Flint et al., 2022, p. 85). Alatas (2003) states that academic dependency affects how social scientific research is conditioned and subjugated in academically controlled nations. After decades, not much has changed (Lancet Global Health, 2018), exposing how researchers from the Global North conduct fieldwork in the Global South and how readily neocolonialism terminology and dependency can be applied to their activities.

Mills et al. (2023) highlight the North–South distinction, where the North represents wealthier countries like North America, Europe, Japan, Australia, and New Zealand, while the South represents African, Asian, and Latin American countries. This distinction has been used to describe partnerships between the two regions, with the South often seen as a ‘receiver’ and the North as the ‘giver’ (Mills et al., 2023). Most of the time, the North’s benefits from the partnership would go unnoticed, for example, through the rhetoric that North–South partnership is a kind of international aid provided by the North. However, the Global North–South division has also been criticised. In part, scholars question the unit for analysis. North and South terminology comes with generalisations, which may not always reflect the nuanced nature of the globe. Also, the world is dynamic, and countries develop. Which countries belong to the Global North or South may change. Whether it is appropriate to categorise countries into rigid groups deserves reflections. Nevertheless, while acknowledging all its limitations, this paper still refers to the Global-North division to highlight the persisting inequalities in the world and global research in line with the existing studies in the same line of literature (e.g. Alatas, 2003; Flint et al., 2022; Guzmán-Valenzuela, 2019).

The structural inequalities in Africa’s IRC are a vital topic that requires timely attention due to its close entanglement with academic neocolonialism and dependency. Despite the extensive recent studies on the North/South divide in IRC (see Oldac et al., 2023; Yang et al., 2023), little research on this trend focuses on Africa. This study is aimed at investigating the characteristics of neocolonial relationships and science in the IRC, highlighting the timely importance of understanding these dynamics in resource-constrained Africa. The primary focus is the degree and pattern of Northern engagement in co-authoring academic articles using data from Ghana’s higher education. The study examines how neocolonialism and academic dependency are saliently manifested in the Global South research and North–South IRC discourse. As such, this study seeks to answer the following research question: How do neocolonialism and academic dependency influence Ghanaian researchers’ IRC decisions and experiences?

The following section will introduce the context of this study. Subsequently, the paper will delineate neocolonialism and academic dependency as theoretical lenses. Methods, Findings, Discussion, and Conclusion sections will follow.

Africa's and, within that, Ghana's research in global knowledge production

Mills et al. (2023) highlight the importance of global publishing and writing for African academics' career development in a global research economy. Bibliometric data show that African research accounts for over 3% of all indexed papers, with South Africa, Egypt, and Tunisia dominating (Mills et al., 2023). African research is significant in agriculture, public health, and applied sciences (Mouton & Blanckenberg, 2018). Africa's current journals' battle to maintain scholarly credibility and visibility is further complicated by the increasing commercially oriented publishers and the academic rhetoric concerning 'predatory publishing' (Inouye & Mills, 2021). Only 0.7% of articles in worldwide indexes, such as Web of Science, were from Africa in 2008 (Mills et al., 2021). This climbed to 1% 10 years later despite the massive worldwide expansion in research (Duermeijer et al., 2018). The above evidence shows that African research in global knowledge production is still in nascent stages. Nonetheless, Elsevier claims that a change is coming and that Africa is the world's fastest-growing scientific region (Mills et al., 2023).

African universities' research capacity has been a concern since the early 2000s (Tousignant, 2018), with West African research institutions requiring some articles to be published in international journals. Curry and Lillis (2017) highlight the transformation of scholars' interests and values in Africa, with many African researchers finding themselves on the margins of an economy controlled by Global North journals and international publishing conglomerates. These trends threaten the prestige of local African journals (Omobowale et al., 2014). Mills et al. (2023) argue that the global research economy casts a shadow over African academic publishing, with the African intellectual community relying on global networks and Western publishers for reputation, exposure, and financial remuneration.

In Africa, IRC is viewed as crucial for socioeconomic development (AUC, 2014). Given the context of limited resources, IRC is perceived as a valuable means to enhance the continent's scientific capabilities (AUC, 2014). Indeed, it is important to recognise the shared interests and mutual dependence in knowledge expansion in IRC for all parties involved (Dusdal & Powell, 2021; Knight, 2015). For instance, Knight (2019) characterises a collaboration within a diplomatic framework as one driven by the need to address common issues and self-interests through cooperative efforts. Key characteristics of such collaborations include negotiation, communication, cooperation, reciprocity, mutuality, and compromise (Knight, 2019). Collaborations that embody these characteristics are crucial for overcoming divisions and effectively addressing global challenges (Knight, 2015). Studies have also shown that IRC has been an important way to quickly improve research impact and build capacity in some developing research systems, especially for China (see Marginson, 2018). However, the context of Africa and China is very different. In most African contexts, IRC tends to result in increased dependency and inadequate sustainable capacity building (Adriansen & Madsen, 2019).

African practices of IRC have faced criticism for colonial practices, as African researchers are often treated as mere data collectors (Kingori & Gerrets, 2019; Nolte, 2019). Therefore, the dominant position of global publishing conglomerates and inadequate digital research infrastructure in Africa is crucial for understanding the challenges faced by African researchers and publishers (Posada and Chen, 2018). Collier (2013) also highlights how migration exacerbates inequalities and dependencies between

developed and developing nations. He argues that the migration of skilled individuals from African countries leads to a 'brain drain', undermining local economies and governance structures, perpetuating a cycle of dependency reminiscent of neocolonial dynamics (Collier, 2013).

Regarding the Ghanaian research system, Mouton and Blanckenberg's (2018) study reveals that academics published less than 5000 indexed publications from 2011 to 2015 despite Ghana being Africa's eighth-largest economy (with a GDP of USD 58 billion) in 2021. While being a lower middle-income country and more wealthy compared to neighbouring Francophone West African republics, Ghana spends less than 0.2% of GDP on Research and Development (Fosci et al., 2019), providing university researchers with little institutional backing. Reform attempts in Ghana have been contentious due to the small annual book and research allowance for faculty, in addition to the country's lack of a national research policy and direct responsibility for research institutions (Fosci et al., 2019). Most of the limited spending of GDP on Research and Development goes to government institutes (Mills et al., 2023), creating the space for institutions and overseas donors to function as research funders for local institutions.

Outside global disciplinary communities, Ghana faces challenges in navigating Global North-dominated research cultures (Mills et al., 2023; Shapin, 1994). Global North cultures, including primary citation indexes, journal impact factors, and publication metrics, are the ground rules, and Ghanaian researchers and publishers need to work hard to survive in this bibliometric market (Mills & Branford, 2022). Ghanaian researchers and academic publishers struggle in the shadow of a 'credibility economy' (Shapin, 1994) and the digital infrastructure dominated by multinational corporations. Further, postcolonial critics have long criticised African academics for their 'extraversion' in research (Bayart, 2000), influenced by their colonial past and 'Global North' orientation agenda (Hountondji, 1990). This outsider mentality is evident in Ghana's university strategies (Gyamera, 2019) and global publishing collaborations (Mégningbêto, 2013).

The selection of Ghana for this study is justified by the reason that Ghana is uniquely located in West Africa as one of the few English-speaking colonised countries. Ghana has long been recognised as a pioneer and influential voice in West Africa's education landscape, serving as a model and inspiration for neighbouring countries (Ankomah-Asare & Nsowah-Nuamah, 2016). The Ghanaian higher education sector is well-documented, with an abundance of government statistics, policy documents, and academic research available for detailed analysis. While Ghana's higher education system exhibits distinct features, many of the challenges and transitions it faces are shared by other nations in West Africa, particularly those with similar colonial histories and contemporary development objectives.

Ghanaian universities have a 'do or die' strategy for internationalisation (Gyamera, 2019). Ghanaians collaborated more with researchers outside Ghana than with researchers within Ghana, as 3869 of the 5089 co-authored articles (i.e. 76%) involved IRC with 51% of corresponding authors collaborated outside Africa (Owusu-Nimo et al., 2017). In Ghana, there is an increasing trend in IRC with institutions in Europe, US, UK, Asia-Pacific, and North America than with African-based institutions (approximate 3% with South Africa and only 1% with Kenya and Tanzania (Mégningbêto, 2013; Danquah et al., 2024). Ghana's growing involvement in global research makes it an interesting case to explore the manifestations of neocolonialism and dependency in IRC. Insights and lessons from the Ghanaian context can significantly contribute to the broader scholarly discourse on higher education in Africa.

Ghanaian journals produce scholarly work on African scientific issues and national policy discourse; however, international citation indexes often ignore this work (Harsh et al.,

2021). Rather than seeing African-based journals as being undercut by dominant commercial publishing platforms, can these regional knowledge pathways coexist with hegemonic global research infrastructures? Given the epistemological, structural, and economic inequities plaguing IRC (Halvorsen & Nossun, 2016), it seems unreasonable to expect individual researchers in resource-constrained countries like Ghana to manage these relationships independently. Against this backdrop, this study examines the extent and dimensions of neocolonialism and dependency entrenched in IRC in Ghana and how it influences researchers' decision-making in IRC.

Theoretical lenses: neocolonialism and academic dependency

Neocolonialism describes the Global North's dominance over the Global South, characterised by economic, cultural, and political factors (Horvath, 1972). Neocolonialism manifests as dependency, subservience, financial duties, and limits imposed by the neocolonizer, highlighting the need for a comprehensive understanding of colonial history (Siddiqi, 2007). Durokifa and Ijeoma (2018) highlight the potential for researchers in the Global North to increase their Western political influence in Africa through neocolonialism. This can lead to the spread of dominance over resources and intellectuals, perpetuating colonialism in another era. For instance, Murray's (2009) research on the African continent highlights the intensifying influence of 'impact-factor fundamentalism' (Murray, 2009) on African institutions. UK and US research policymakers are working to reverse the 'metric tide' (Wilsdon et al., 2015). However, the naturalisation of divisions between 'local' and 'international' research has reinforced colonial hierarchies, affecting African institutions (Nolte, 2019, p. 301).

Ghana's higher education system reflects the legacy of British colonial models, posing ongoing challenges in balancing Western frameworks with local needs (Amuzu, 2022). Ghanaians collaborate with UK institutions and other nations on research initiatives, student exchanges, and capacity building, which has ramifications for how universities address issues of equity and national development (Aboagye, 2021). In the context of IRC in Ghana's higher education, neocolonialism theory stresses the possible imbalance of power, control over research agenda, and unequal capacity-building that may prolong the dominance of former colonial institutions and knowledge systems. This highlights the need for a more inclusive approach to understanding and addressing colonial dynamics.

Neocolonialism is a significant issue in North–South collaboration, particularly in publishing and authorship decisions (Jentsch & Pilley, 2003). This imbalanced production of academic literature has deprived developing countries in the Global South of critical knowledge for social and scientific development (Altbach, 1984). This systemic intellectual dominance, created during the colonial era and sustained by political strategies, deepens an unfair partnership in IRC and an unequal global research system. The positional advantage of the Global North (Oldac et al., 2023) researchers makes Global South researchers vulnerable. It perpetuates the dependence of the latter on the former in IRC. Also, the over-dependence by the Global South on the Global North for resources deepens perpetual dependency. Hence, we argue that the neocolonialism lens should be discussed together with the academic dependency theory when discussing the IRC of Ghanaian researchers.

Academic dependency theory, argued by Alatas (2000, 2003, 2022), suggests that global knowledge production has a division of labour, in which the researchers in the South are in a follower position. This theory suggests that researchers in the South rely

on Western institutions and theories that define research agendas, problem definitions, and benchmarks of excellence. There is a psychological layer to this dependency, in which the dependent scholar is more of a passive beneficiary of the social science powers' research goal, techniques, and ideas. This dependency is influenced by a shared perception of intellectual inferiority against the West (Alatas, 2000). Alatas (2000) identifies various aspects of academic dependency, including dependence on ideas, educational technology, aid for research and teaching, investment in education, and the demand for the Global South social scientists in the West for their talents, which are all relevant to neocolonialism in the context of Ghana.

The degree of academic dependency measured by the structure of control and ownership of publishing houses, journals, and technology resources deepens dependency and widens the inequity gap. This is influential in Ghanaian researchers producing little novel theoretical analysis despite their potential as they do considerable empirical work. Most of the research focus, theoretical viewpoints, and methodology in Ghana are influenced by Western research. This is the most significant aspect of academic dependency.

Methods

A qualitative case study technique is used to examine 'an intensive, holistic description and analysis of' IRC in Ghana (Merriam, 1998, p. xiii). The purpose is to investigate the situation and dynamics of IRC in Ghanaian higher education. We selected a research-oriented and comprehensive university in Ghana to collect in-depth information about Ghana's IRC. We conducted semi-structured interviews to address the research questions. Data were collected between July and November 2022.

The study, through purposive and snowballing techniques, gathered information from senior academic researchers, institutional research directors, and national policymakers. Also, some institutional research directors served as national policymakers. The study's researchers and institutional research director participants were carefully selected from the chosen university. The university occupies a firm place in Ghana's higher education. The University is acknowledged as Africa's top centre of excellence for instruction in Science and Technology, helping Ghana's and Africa's technological and socioeconomic growth. The University maintains a multitude of connections with both local and international researchers, organisations, and enterprises and performs joint research in various physical and biological fields. The university is comprehensive in its departments and research areas and includes social sciences and humanities areas, despite its focus on sciences and technology.

The participants were chosen based on a few criteria. First, we paid attention to representing as many of the six research areas proposed by the Organisation for Economic Co-operation and Development (OECD, 2007) as possible. The idea behind this criterion was to ensure the exploration of patterns occurring across research fields in the research system of Ghana. The study did not intend to compare the differences among each research field, which could have provided additional insights and would be a separate investigation on its own. Also, we verified that our participants had previous IRC experience with IRC papers. To ensure this, the first author did initial checks about the IRC publication records of the participants and also confirmed with the participants during the interview. Despite our initial intention to include both genders in the study, no females who had published internationally were identified and available during the

Table 1 Demographic information of participants

| Pseudonyms | Gender | Rank/qualification | PhD country | Research area |
|------------|--------|--------------------|--------------|-----------------------------|
| R1 | Male | Snr lecturer/PhD | Malaysia | Social sciences |
| R2 | Male | Professor/PhD | Ghana | Engineering and technology |
| R3 | Male | Snr lecturer/PhD | Hongkong | Humanities |
| R4 | Male | Snr lecturer/PhD | UK | Natural science |
| R5 | Male | Professor/PhD | Ghana | Social sciences |
| R6 | Male | Snr lecturer/PhD | Ghana | Humanities |
| R7 | Male | Snr lecturer/PhD | Ghana | Social science |
| R8 | Male | Snr researcher/PhD | Germany | Social science |
| R9 | Male | Snr lecturer/PhD | Ghana | Engineering and technology |
| R10 | Male | Snr lecturer/PhD | Ghana | Social sciences |
| IRD1 | Male | Professor/PhD | Ghana/UK | Medical and health science |
| IRD2 | Male | Professor/PhD | Amsterdam | Medical and health sciences |
| IRD3 | Male | Professor/PhD | Scotland | Engineering and technology |
| IRD4 | Male | Professor/PhD | Ghana | Social sciences |
| IRD5 | Male | Snr lecturer/PhD | Ghana | Engineering and technology |
| IRD/NPM1 | Male | Professor/PhD | Ghana/Latvia | Engineering and technology |
| IRD/NPM2 | Male | Professor/PhD | Australia | Humanities |
| NPM | Male | Professor/PhD | UK | Social science |

*R, researcher; *IRD*, institutional research director; *NPM*, national policy maker. Note: Some institutional research directors doubled as national policymakers IRD/NPM

fieldwork. In addition, we interviewed three institutional-level research directors who serve as national policymakers. The participants are summarised in Table 1.

Each semi-structured interview lasted between 60 and 120 min. The gathering of data continued until the saturation point of data was reached. All the interviews were audio recorded, and the information was anonymised. To recruit individuals, the researchers utilised snowballing and criteria-based recruitment. Participation was voluntary. The ethical procedures followed in the study were reviewed and approved by the first author's institution. In addition, four criteria were used to measure trustworthiness as proposed by Lincoln and Guba (1985), namely, credibility, dependability, transferability, and confidentiality. In achieving trustworthiness, prolonged engagement, member checking, and 'thick and concise' data that allowed credible interpretation and comparative evaluation in other contexts were ensured (Lincoln & Guba, 1985).

For the interview data acquired, we used a thematic analysis (Clarke & Braun, 2017). In qualitative research, thematic analysis is extensively used to uncover, analyse, and report themes, allowing relevant themes and subjects to become apparent from the data (Miles et al., 2020). The first author conducted the field interview and collected data since he is familiar with the research context. After collecting the field data, the first author shared it with the other authors to familiarise themselves and identify and discuss potential themes and patterns. Their feedback was necessary for enhancing and authenticating the codes for analysis. Afterwards, the first author did the first coding cycle. The first coding cycle comprised a bottom-up study of all obtained data to identify and code developing issues connected to the research purpose and question. The

second round of coding includes categorising the codes and developing themes. The first author further shared and discussed the emerging themes with the second and third authors and solicited their expertise. The continuous discussion among the authors improved the comprehension of the results and the rigorous nature of the analysis. The research findings are presented in the next section.

Findings

The findings are organised around three broad themes with sub-themes: (1) neocolonial structures, (2) dependency resulting from external factors, and (3) dependency resulting from internal factors. These themes give an in-depth account of how neocolonial relations influence researchers' dependency in Ghana, providing insight into the field's complex dynamics.

Neocolonial structures

The theme highlights how power dynamics inherent in neocolonialism influence decision-making processes and sustain the Global Northern dominance in IRC. The theme reveals sub-themes explaining how neocolonial structures controlled by the Global North impact Ghanaian researchers' capacity and position the Global North to determine research agendas. The neocolonial structures in IRC and the Global North's determination of research agenda impact the independence and sustainability of Ghana's research initiatives, leading to over-dependence on foreign sources. The sub-themes that emerged are discussed as follows.

Global North as determinant of Ghanaian research agendas and priorities

Participants revealed that IRC research priorities are determined by their Global North partners. Most participants explained that the political orientations of funding agencies and external organisations drive priorities and research areas. Majority of the participants explained that this situation makes them perpetually dependent on their Global North partners in IRC. One of the participants said:

Western organisations and researchers are big to the point that they influence the direction of research, which can also be very bad for the future of research and knowledge creation. You realise that funding agencies, whether we like it or not, are influenced by certain political orientations, so these political orientations also influence the kind of things they are interested in funding, so you realise that the funding agency informs what you can research into. **R10**

An institutional director and a national policymaker also shared a similar view by saying that:

They play a role, set parameters, and determine the where, what, and how of IRC as long as they provide the money for the research. My beef is that it is not always what they want to fund, which is related directly to solving the problem in the country. They come with their agenda, and because you want to progress, whether it is relevant to your work or not, you must agree with them. **IRD/NPM 1**

Other participants noted that the dynamics defining IRC do not always reflect the local Ghanaian people's needs, interests, and concerns. They said that international organisations often do not consider local cultural settings, values, practices, and theories, and that foreign perspectives and theories are likely to be imposed on local researchers. Majority of the participants claimed that they are driven to skew their proposals to conform to Western donors' standards to win funds, which challenges the alignment of local research needs with global agendas and contributes to perpetuating neocolonial systems and dependency. Some of the participants responded as follows:

On our part of the world, most of the research we collaborate on is of no interest or relevance to our local development trajectories; we are doing it because that is where the funding is available. So, the nature and requirements of the funding agencies skew the research orientation because we need their support to carry out research. **R8**

Global North as repositories of data perpetuating and sustaining dominance

Participants revealed that their Global North partners mainly own and control IRC data. They explained that Global North's positioning as a data repository mostly makes them define the criteria for resource distribution, who to access data, particular areas of research interest, and who will participate in the partnership. Most participants explained that even where data is to be collected from Ghana, their partners in the Global North store the data after fieldwork because they have the technology. Participants explained that they are compelled to skew their proposals to access data from the Global North. Most participants explained that this situation makes them perpetually dependent on their Global North partners in IRC. One of the participants said: 'The West is our repository of extensive data, and you need the data to be able to write as an academic, so you skew your grant proposal so that you can access data to do your research.' **R7**.

Other participants also explained that their dependence on Global North partners for data is attributed to their university's inability to subscribe to large-scale international databases. They explained that they must pay before accessing some international databases due to limited databases accessible locally, which is financially challenging. They explained that the way to avert such a burden is to rely on their global north collaborators to access data. One of them had this to say:

Even with our university, there are few databases the university has subscribed to. So in most of our research, you must pay before you can have access compared to other universities in the West where the students even have access to a vibrant database. Our data is very poor or scanty, but when working with them, you get rich data and literature **R2**.

Resource and technology ownership positions the Global North as the IRC gatekeeper

This sub-theme became evident as participants explained how Global North institutions and firms strongly influence research data and technology in IRC. Most research directors confirm that IRC involving local and Western institutions' partnerships is mainly controlled and dominated by Western firms, universities, and research institutes due to the Western institutions' structural and technological advantage and position over the local institutions.

Those partners in the Global North have more resources than we do, so collaborating with them is easier and faster than collaborating with people locally, so we are always bent to depend on them, especially in research collaborations. **IRD 5**

The participants stressed the concentration of technology in the Western world and the absence of scientific research laboratories and gadgets in Ghana, making researchers primarily recipients rather than equal partners in IRC. Most participants explained that data collected in Ghana are often transferred, controlled, or utilised by foreign collaborators due to the absence of sophisticated technological gadgets and data storage systems in Ghana, potentially limiting the country's ability to leverage its research findings for development. One of the participants commented as follows:

One challenge in Africa is that we do not have much technology. Sometimes, as a scientist, when you need the laboratories and the set-up, you need to go elsewhere and do it. In Africa, which countries will you get these [laboratories and set-up]? So, the fact that we do not have those technologies here will not stop us from making advancements so that we will depend on our partners from the global north in terms of labs, machinery, and technology. **R10**

Notice the use of 'depend' in the quotation above. It is an important matter that helps researchers conduct research through their IRC with Global North, but it also creates a vicious circle of unbalanced power in which the Ghanaian researchers gradually lose their autonomy. The following section will delve deeper into the theme of dependency.

Dependency resulting from external factors

This theme strongly emerged from the participants' responses, confirming the strong discussions of Academic dependency in the literature (see Alatas, 2003, 2022). However, the existing discussions do not adequately cover the dependency in IRC and the specific context of Ghana. Dependency in IRC resulting from external factors will be elaborated on with three aspects in which it operates in Ghana. The findings may also be relevant to the overall landscape of Africa.

The role of funding

This sub-theme emerged as participants' responses revealed how funding and grantsmanship determine the unequal representation of African researchers' views in decision-making processes and affect inclusivity and diversity in IRC. Participants revealed how financial structures and resources in the form of grants received from Global North are used to set parameters in IRC as it defines who is to be involved, what to study, where to study, and how to disseminate research findings. This perpetuates disparities by making local researchers' passive partners in international research collaborations. A participant who is an institutional research director and a national policymaker shared similar beliefs and gave an example to solidify these arguments. He explained that:

For instance, some people may give you money from the USA to do something in the poultry industry in Ghana because of their economic interests. If your research reports that they should stop importing poultry, they will not agree with you, so in that case, we are always quiet and follow what they tell us and want to see. Where

the funding is coming from will determine who you will collaborate with and what to report and disseminate. **IRD/NPM 2**

The participants explained that due to the lack of national research funding for researchers in Ghana, the disparities between Ghanaian researchers' institutions and those in Western countries are more evident in IRC, which has increased dependency on Western partners during IRC.

In Ghana, we do not have any national funding agency. Most of the funding agencies we have, apart from those that are institutionally based, are from the West. However, if they fund a project in a third-world country, they will want researchers from their side to be involved. Sometimes, before you can apply for a research grant, you need to get partners from the global north who can probably be attached to before you can win grants, so how can we down here compare ourselves to those up there? **R9**

A national policymaker commented that accessing research funds benefits not only local researchers in IRC but also Western researchers. He explained that most Western researchers prioritise research in most developing African countries because it allows them to access funding, win grants, and gain visibility quickly. He commented that:

It helps those in the Global North a lot because I know that if you write something that concerns developing countries, it is easy to get funds, and they also want to increase their international exposition and to win grants, so it also helps them. **NPM**

Dependence in the dissemination of knowledge after IRC

This sub-theme emerged as participants' responses revealed the prioritisation of Western journals for publishing research, potentially leading to a bias in disseminating knowledge. Participants complained about the overemphasis on Western-centric publication metrics and impact factors, which challenges gaining recognition for research in non-Western journals. Other participants explained that external partners mainly control the dissemination of research findings. Some of the participants commented as follows:

I am not surprised that papers I have written with my colleagues in the USA universities get published within a shorter period than papers I have written with some colleagues in Ghana here. So, those papers will undergo rigorous processing; these are the disparities I see. There is a psychological effect to that; for me, it is what it is; we can decide to play the ostrich, but within the academic community, the global north dominates. **IRD4**

Other participants also shared similar beliefs, but they explained that the negative perceptions given to local researchers and journals widen inequality as foreign journals and researchers are attached with prestige than local African journals. One of them had this to say:

When you are from Africa, I realised in the publication environment that the address you use in sending your paper to a journal matters, so sometimes, when you collaborate with people from the global north like the UK and Germany, they become the corresponding authors. If I send it from my side, it will take me between 6 and 8 months, sometimes a year, before I get the response. However, when they send it within 2 or 3 weeks, they receive the response, so it turns out to be faster for the

people in the global north, and the probability of rejection is lower for them than for us. **R2**

Other participants explained that most high-impact journals and editors are Western-based and act as gatekeepers, and they may not prioritise African indigenous theories and knowledge. They explained that since domestic issues are not prioritised, most international collaborations have an insignificant impact on local policy decisions. They explained that research findings and recommendations from collaborations mainly do not influence policymaking in Ghana. Some of the participants had this to say:

Western-based editors typically see domestic issues as limited in scope and philosophical understanding, and the context of the researcher and its audience is accordingly limited. However, if you collaborate to do international research, what happens is that you may do the research in Ghana, but its interpretation should benefit Western readership; this even helps the local researchers get a broader readership. So, we must partner with them to get published in their journals. **IRD 5**

This way, the dependence on Global North outlets for knowledge dissemination negatively impacts policy-making at a local level, especially in Ghana.

Dependence on Global North benchmarks and standards for recognition

This sub-theme became evident as most participants commented that local university rankings are based on Western benchmarks and standards, forcing most Ghanaian scholars, higher education institutions, research institutes, and researchers to strive to retain international status to be acknowledged. Some of the participants commented as follows:

All the local rankings, prestige and recognition are based on foreign standards. There is nothing like local standards. For instance, if I am collaborating with somebody from Togo and Hong Kong, which one do you think the university will emphasise much? We will see you coming from Hong Kong as somebody who is of 'much more importance' than the one who is a local African champion here. So, implicitly, we have preferences; we have grades in IRC. **R7**.

R7 observations are striking in how research policies mostly see the Global North and the rest. The participants have highlighted exceptions, such as Hong Kong in the east. The participant responses have supported earlier findings of the authors that Hong Kong is an exception because of its position to the West: '...they have reputable universities that produce valuable outputs within a Western-integrated or Western-oriented system' (Oldac et al., 2023, p.8).

Dependency resulting from internal factors

This theme depicts how institutional benchmarks and policies within African institutions and those set by Ghanaian higher education institutions contribute to and mitigate neocolonial relations and academic dependency in IRC. The theme revealed how local institutional policies position local researchers to be perpetual subservient to their Global North counterparts in collaboration and how dependency manifests in IRC. The sub-themes revealed are discussed as follows.

Local institutional policies and benchmarks perpetuating dependence

This theme revealed how local universities' policies and attitudes towards research and collaborations perpetuate the dependency on the global north. The participants revealed that local universities' policies favour collaboration with global north partners over local researchers. Participants explained that more value is attached to publications with Western partners as co-authors than local co-authorship papers. They commented that researchers with co-authorship papers with global North partners who received education and training in the West receive quick acceptance and promotions. Others complained that publications in Western journals are perceived to be of good quality and receive more attention and acceptance by assessors during promotions than local journals.

We have been told that our papers submitted for promotions must have some international publications in them; the best entry point to do that is to work with people in the West who are known contributors to certain very quality journals already so you can get yourself published internationally and accepted by your own university.

IRD5

IRD3 shared similar views but explained that sometimes their colleagues who had their PhD abroad are given preferential treatment by their universities than those who pursued their Ph.D. locally. He had this to say:

At a certain point in time, if you did your PhD locally, some people did not want to recognise you; they would rather recognise PhD from outside, so it is this idea of outside being better than the local ones that cushion all these things. **IRD3**

The majority explained that although universities in Ghana have departments responsible for research, more support has yet to be put in place for local researchers to access that limited support. Others complained that the available research institutions and centres even depend on Western charitable donors for funding, limiting their efforts and capacity to support local research initiatives. One of them commented that:

The challenge is that in this institution, there is no funding internally; even travel grants tend to be created in a way that does not help staff find money within the institution. So, apart from your salary, and the small research allowances you receive from the government, you do not have any internal funding to do research. **R8**

Government attitudes perpetuating dependence on Global North in IRC

Participants also complained about the government of Ghana's unwillingness to establish a national research fund for domestic researchers. Participants complained that local universities and the government have not done much in terms of incentives to promote research and development. Participants complained about the book and research allowance given to faculty by the government as minimal. One of the participants had this to say:

Nationally, I do not think there is any incentive, if at all, it is at the university or institution level, but nationally, I do not find existing incentives. Even the government's Book and Research Allowance is nothing to write home about. Even when trying to get your international partners, the necessary documentation for them to travel here could be complicated and hectic to secure. **IRD 1.**

As the quotations here demonstrate, academic dependence does not only function as an outside-in phenomenon. The local institutional and national policies may play a role in perpetuating academic dependence on the Global North, which may hinder Ghanaian researchers' autonomy.

Discussion and conclusions

The study explores the influence of academic dependency and neocolonialism on Ghanaian researchers' decisions regarding involvement in IRC, highlighting the unequal global research system, particularly in the context of North–South IRC discourse.

The study reveals that the ongoing academic dependency (Alatas, 2003, 2022) in the international research collaborations (IRC) in Africa is a manifestation of academic neocolonialism. This dependency extends beyond colonial legacies, reflecting and moving beyond the colonial context, and can be explained in various ways.

Firstly, the IRC in Africa faces unequal power dynamics when collaborating with researchers in the Global North, resulting in uneven decision-making processes. The Global North dominates funding institutions, gatekeeping research decisions and priorities. This disadvantaged position affects Ghanaian researchers' initiatives, independence, and sustainability, making them susceptible to perpetual dependence on the Global North.

Second, the IRC's dynamics prioritise Global North theories over local African theories and African science, stifling local cultural values and practices. This results in researchers skewing proposals to conform to Western donors' standards, challenging the alignment of local research needs with global agendas. This perpetuates neocolonial systems and dependency, as African theories and science are prioritised over Western ones.

The absence of advanced technological gadgets and data storage systems in Ghana, particularly in comparison to the Global North, has led to the transfer of primary data collected by African researchers, limiting their ability to leverage their findings for development. This highlights the Western-dominated technology concentration and the lack of resources in African countries, making them primarily recipients rather than equal partners in IRC. The positional advantage of the global north (Oldac et al., 2023) researchers over their counterparts in Ghana makes them vulnerable. It perpetuates the dependence of the latter on the former in IRC. The IRC is increasingly dependent on Western institutions, who have the upper hand in research data and technology, thereby enhancing their position as global leaders and fostering a higher level of dependency.

Overall, these findings support the postcolonial critics that the African academia has long had academic 'extraversion' (Bayart, 2000), with the continent's research goals shaped by its colonial past and orientation to the agenda of the Global North (Hountondji, 2009). This outsider mentality can be seen in Ghana's university strategies (Gyamera, 2019), data on global publishing collaborations (Mêgnigbêto, 2013), and even the way Ghana's researchers giggle about 'African science' while lamenting the poor state of their research facilities in comparison to those in Europe (Droney, 2014).

African researchers in Ghana face pressure to publish in Western-based journals, which are more prestigious than local ones. This pressure has solidified the authority of these indexes, undermining the reputation of numerous African publications that were not Scopus or WoS indexed, as per a study by Mills et al. (2023). This also supports evidence in the literature that the prestige of long-established local African journals started diminishing due to global university rankings (Omobowale et al., 2014).

African researchers in Ghana are compelled to navigate global north-dominated research cultures due to the dominance of Western theories in high-impact journals in the global north. These journals prioritise Western theories over indigenous African knowledge, limiting local initiatives and policy decisions. This practice contributes to building research and institutions in the global north, perpetuating dependency and not adequately empowering local theories, philosophies, researchers, and institutions. This confirms that academics in Ghana now have little option but to navigate Western-dominated research cultures (Mills et al., 2023). Academic publishers across Africa are also struggling in the shadow of a ‘credibility economy’ (Shapin, 1994) and a digital infrastructure dominated by a few multinational corporations.

The study revealed that institutional benchmarks and policies within African institutions and those set by international partners contribute to and mitigate neocolonial relations and academic dependency in IRC. This has led to local higher education researchers and institutions setting policies with international benchmarks, influencing local decisions like promotions and recognition. Publishing in foreign journals with high impact factors received more recognition than in local journals. The African intellectual community relies on global networks and Western publishers for reputation, exposure, and financial remuneration (Mills et al., 2023). The primary citation indexes, journal impact factors, and publication metrics establish the ground rules in Ghana’s higher education, with strategies Ghanaian researchers and publishers use to merely ‘get by’ in this bibliometric market (Mills & Branford, 2022).

In the Ghanaian university environment, researchers from Global North institutions are perceived to be more recognised than those locally trained. This situation prompts Ghanaian researchers to engage in international research and capacity-building workshops, highlighting the importance of international recognition. This implies that locally organised capacity-building activities may be overlooked by local researchers. Droney (2014) argues that Ghanaian scientists are committed to national development but mock the notion of African science, aiming to present themselves as global scientists not limited by the term ‘African’ and achieve the best careers in Ghana or elsewhere (Droney, 2014, p. 381).

Research funding is significant in fostering academic dependency through neocolonialism, as Global North institutions dictate inclusion and exclusion parameters. Oldac et al. (2023) confirm this, indicating potential epistemic inequalities and positional competition. Collaborating with certain institutions in the Global North/West increases the chances of obtaining international research funding, leading to a perpetual dependence on these institutions. This study highlights the need for addressing neocolonialism and promoting collaboration in a more inclusive and equitable research environment.

Overall, these discussions confirm the views in the literature that neocolonial practices in Africa involve dependency, subservience, financial duties, and limits imposed by the neocolonizer (Siddiqi, 2007). Researchers in the global north may engage in neocolonialism by increasing their economic and ideological influence (Durokifa & Ijeoma, 2018) through IRC in Africa.

The study reveals that local institutional and government factors also hinder Ghanaian researchers, perpetuating neocolonialism and dependency on IRC. The government’s unwillingness to establish a national research fund and inadequate policies in higher education institutions hinder local research. The Ghanaian government budget allocation to higher education institutions has often fallen short of meeting the norm-based costs, with differences of 28.9% in 2005/06 and 23.4% in 2009/10 (UNICEF, 2020). The 2022 education budget was 3.8% of GDP, lower than the UNESCO target of 6%. There is a need

for increased efficiency and commitment to budgetary allocations to improve learning outcomes and support higher education reforms (UNICEF, 2020).

The reliance on Western charitable donors limits the capacity of local institutions to support local research initiatives, forcing them to subscribe to large-scale international databases and burdening them financially. This supports an earlier study that Ghana lacks a national research policy (Fosci et al., 2019). This serves as a disincentive to local researchers and a catalyst for dependency on the global north.

Policy recommendations

In this section, we have provided some practical policy recommendations based on the identified issues revealed by the findings. The policy implications will be examined using Ghana as a specific example, but they may also apply to other contexts in Africa, which are going through academic dependency and neocolonial tendencies in IRC.

We acknowledge the importance of IRC as an important way to learn from each other and share expertise and equipment. We should continue to collaborate and learn from each other. However, learning from each other and the experiences accumulated from the Global North countries is acceptable if the collaboration is positioned not to perpetuate dependency on expertise and institutions from the Global North. In practical terms, this means avoiding partnerships that are overwhelmingly positioned to extract data from Ghana without positioning Ghanaian researchers as equal collaborators who contribute substantially to outputs at various stages. Being equal collaborators help build sustainable research capacity through co-learning from the procedures of high-level knowledge construction. Policies should aim to promote equal partnerships for Ghanaian and overall African higher education, requiring evidence of contribution from Ghanaian scholars to any IRC with scholars from other countries and regions. Developing guidelines for international collaborations that emphasise mutual respect, shared decision-making, and a commitment to addressing local needs is crucial for breaking the vicious circle of dependency.

In terms of funding dependency, there may not be a remedy in the short term in terms of the availability of national funding opportunities. However, policymakers and practitioners can still make a difference in the short- and mid-term by ensuring that whenever external funding is obtained for or with researchers in Ghana, there should be some long-term impact on the society and higher education of Ghana and Africa overall. Policies should require knowledge dissemination activities and networking meetings in Ghanaian universities for such grants, which are not too hard to actualise, but researchers may overlook the importance of these when they are not required. Also, policies should target joint and equitable distribution of research funding among local and international collaborators. Establishing joint funding mechanisms that prioritise projects addressing local needs and involving Ghanaian and Western institutions is crucial.

Regarding institutional benchmarks, it is time to work towards creating Ghanaian and African benchmarks to evaluate universities in Ghana. Benchmarks tend to have cultural baggage, and the Ghanaian and African contexts differ. Using benchmarks of another context risks exacerbating dependency on knowledge production and IRC in the long term. Policies should aim to recognise and reward publications in reputable local journals. Moreover, the policy should advocate for increased government support for research and development, investing in and upgrading research infrastructure within Ghana to reduce dependency on Western facilities. Having said this, providing a detailed account of Ghanaian or

African benchmarking systems is beyond the scope of this article, and we invite future studies working on this matter.

Limitations

Qualitative case studies, such as this one, can provide in-depth knowledge about the selected research site; however, they also have limitations that need to be acknowledged. This study included data from a single university in Ghana. This university was specifically selected for being a comprehensive and research-oriented university to elucidate the IRC endeavours of Ghanaian researchers better (more details in the Methods section). Nevertheless, we acknowledge that the selection of a single university may affect the transferability of the findings. The unique characteristics of this university, such as its research focus and resources, may not be representative of other institutions in Ghana or similar contexts. Future studies can encompass a wider range of institutions across Ghana and other African countries.

Another limitation of the study could be participant demographics. Although it was our intention to include both genders in the study, we could not identify a female researcher who had published internationally and who would accept being part of the study during the fieldwork. Hence, the findings reported in this study are only from male researchers. Past research indicates that gender is an important factor, and being male rather than female has a statistically significant impact on the likelihood of co-authoring international papers in traditionally non-central research systems (Yang et al., 2023). This could partly explain the added challenge of identifying female participants in our study. We acknowledge this limitation and hope to address it in future research. Future studies can focus on the gendered dynamics of IRC in the Ghanaian and similar contexts.

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Declarations

Competing interests The authors declare no competing interests.

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