

Agency and Khaldunian Theory of Cyclical Change in Global Research and Knowledge Production

Yusuf Ikbal Oldac

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Yusuf Ikbal Oldac

Yusuf Ikbal Oldac is an Assistant Professor based at Hong Kong Lingnan University. He is also a Core Centre Fellow at the Institute of Policy Studies of the same institution. Yusuf obtained his Doctor of Philosophy in Education degree from the University of Oxford with a full scholarship from the Oxford Centre for Islamic Studies. His research focuses on international and comparative higher education in the context of globalisation.

Abstract

This working paper proposes two conceptual tools for examining emerging research systems. Specifically, the paper highlights Khaldunian theory of cyclical change to incorporate the ever-changing nature of global research and knowledge production, and an agential lens that provides analytical space for examining actors in the continuously changing global system. Agency in the global research space operates at multiple scales and contributes to the rise and decline of knowledge production paradigms, resembling that of cyclical change discussed in the main body. These conceptual tools can be useful lenses for researching the global research system and cross-border research collaborations but are not exhaustive. The working paper provides a discussion on future research directions to illustrate the potential use of these conceptual tools in upcoming projects.

Keywords: Global research; Knowledge production; International research collaboration; Ibn Khaldun; Agency

Introduction: Diversification and pluralisation trends in global research

In today's globalising world, more and more countries are contributing to global research. This means middle- and small-size research systems¹ are increasingly visible in global research system (Marginson, 2021). The codified knowledge in internationally popular institutions, such as Scopus and Web of Science, have increasingly more contributions from diverse parts of the world. This trend, which can be called as the diversification of knowledge space, is a necessary condition for a more equal knowledge system globally, but it is not enough.

The diversification phenomenon, by itself, does not automatically mean that global research is pluralising. Yes, the bibliometric codified knowledge is diversifying with increasing contributions from different parts of the world; however, this is largely due to the newcomers using the epistemologies and research sharing formats of the established systems. The plurality of knowledges, as also famously supported by Santos (2016), is still a goal to be achieved.

There is an inherent difference between the diversification and pluralisation trends. The former is a precondition for the latter, but not an adequate factor to bring about the latter, pluralisation. According to this working paper, pluralisation is accepting the global knowledges as they are, seeing them in equal terms. By contrast, diversification of research system denotes that while more countries are welcome to contribute to the global knowledge system, they are welcomed to contribute within the paradigm of the currently dominant Anglo-European-centric knowledge production.

A more equal research and global knowledge production system is better for all humanity as we can be better positioned to know and solve the problems arising from societies across the globe. The production of knowledge and research publications,

¹ Systems is defined as a 'set of connected things or devices that operate together' in Cambridge Dictionary. Building on this, in this paper I define research systems as a set of connected actors at multiscalar levels within a country that operate together to make up the research and knowledge production system of that country. Research systems are largely parts of higher education systems of that country.

whether in social sciences, natural sciences or engineering areas, must go beyond their unipolar lens in seeing the world.

This working paper argues that there is much to do for truly pluralising global research and knowledge space. It elaborates on the potential position of agency in pluralising global research space. The concept of agency in the overall higher education field is not new. In fact, one of the defining papers of the field discussed agency in higher education two decades ago, and defined it as ‘the ability of people individually and collectively to take action (exercise agency), at the global, national, and local levels’ (Marginson & Rhoades, 2002, p. 289). This definition of agency recently received an update with a follow up article, which nuanced further how agency operates through space making, demonstrating that the topic of agency in higher education is very much active (Marginson, 2022). Also, there are strong discussions of agency in the subtopics of higher education, such as international student mobility (Inouye et al., 2022) and teaching and learning (e.g. Nieminen & Tuohilampi, 2020).

However, locating agency in the research and knowledge production space, which is another subtopic of higher education field, still has untapped potential for further research (Oldac & Yang, 2023). In addition, agency and change are two concepts that go hand in hand. Agency, as defined above, is the collective action of actors to make a *change*. Therefore, an ontological openness of change is important for conceptualising agency. Thus, this working paper also argues for a lens to view the ever-changing nature of higher education and knowledge production space, which is discussed in the next section.

Khaldunian theory of cyclical change: Setting the scene for how agency operates in research space

Global research has never been on equal grounds. Global research and knowledge production as we know it today has been dominated by the use of English language, the epistemologies of the Global North/West and research mediums developed in Anglo-European systems. These constitute influential structural forces for newly emerging systems in the global research space (Marginson, 2022). Several seminal studies already strongly highlighted and captured these structural forces that create inequalities and hegemony in global research. For example, Boaventura de Sousa

Santos's discussions on epistemicide of knowledges outside of the Global North sphere (Santos, 2016) and Miranda Fricker's discussions of epistemic injustice (Fricker, 2007) are important. Hence, the main aim of this working paper is not to capture this inequality again, but rather to discuss potential conceptual tools that can be useful in examining the alleviation of this inequality resulting from the global hegemony and the one-side-serving lens.

One useful conceptual lens for the analysis of inequality and change in global research and knowledge production is the Khaldunian theory of cyclical change (Ibn Khaldun, 2015; originally in 1377). Ibn Khaldun is an influential scholar regarded as the precursor to the modern day sociology (Alatas, 2014). Ibn Khaldun developed his cyclical theory of change for analysing the rise and decline of civilisations, but the theory is also a useful tool for analysing global research and knowledge production systems.

Khaldunian theory of cyclical change differs from most approaches to change in that it departs from the teleological understandings of history, change and progress. Teleological understanding of history posits a grand narrative of linear developments in which everything *changes for the better* (Şentürk, 2022). By contrast, Khaldunian theory of cyclical change argues for critically engaging with what is meant by this narrative of change and progress (Alatas, 2014). What kind of progress is it? In whose terms? In what context? Comparative global higher education research has to ask these questions to be able to engage with the research and knowledge production outside the Global North/West and go beyond the one-side-serving lenses. Is a certain paradigm of knowledge production reaching hegemonical influence in today's world a change for the better? Are we sure that all history was marching towards the Western dominance in knowledge production because it was meant to be so as a linear progression of history would suggest? Not necessarily. We may have more advanced technology making every part of our life different, but in terms of humans as society and global knowledges, the current one-side-serving paradigm is not necessarily 'better' than preceding paradigms. The world is not always developing a better knowledge production space in linear fashion; there is no single process and there are cycles of ups and downs. Hence, the idea of cyclical change is important to grasp.

Acknowledging the existence multiple processes and non-linearity in the research space are preconditions for discussing agency in true global plurality.

As such, this paper argues for three propositions building from Ibn Khaldun's theorisation of science of human society (2015; originally in 1377). Ibn Khaldun argued that no hegemonic power can control everything and no hegemonic power stays as hegemonic forever (Şentürk, 2022). No hegemonic power can be absolute because the peoples of global majority are not puppets, neither in their workforce nor in their intellectual knowledge production. Ibn Khaldun argued that change is constant and happens in a cyclical way. The closer a hegemonic paradigm gets to its peak, the more it approaches its decline. A decline does not necessarily mean ceasing to exist, but at least the end of a hegemony.

As such, research systems in the world are in constant flow of becoming and changing. There is always rise and decline of epistemological powers and the only thing that is constant is the change itself, as usually discussed citing Heraclitus (e.g. Marginson, 2023). However, an important difference of Khaldunian theory of cyclical change that may differ from general discussions of change is its emphasis on ontological nonlinearity (Ibn Khaldun, 2015). The ontology of change in global research and hegemonic epistemologies may not follow a linear fashion, as *not all epistemologies are more developed versions of previous or older ones*. The cyclical nature argued here goes against the teleological lenses towards change by arguing that it occurs in non-linear ways. Nonlinearity argument may seem obscure but, it is especially important for working towards establishing a more equal global research space. When a knowledge paradigm is socially constructed to be more 'superior' than others based on the proxy evaluation of it being more prevalently used in contemporary times, the hegemony and inequality set in. Nonlinearity proposition highlights that the temporal proximity (being more recently dominant or not) of a knowledge paradigm is not an adequate justification for hegemony.

Building on the Khaldunian theory of cyclical change, this working paper argues for three propositions, which are useful in the examination the global research and knowledge production system:

(1) no hegemonical paradigm of knowledge production and research can establish an absolute determination on every knowledge production on globe

(2) no hegemonical paradigm of knowledge production and research can stay hegemonical forever and,

(3) the current hegemonical power in global knowledge production is not necessarily a 'more developed' version of previous ones, neither the future ones will necessarily be so.

These three propositions are crucial in going beyond the diversification trend and realising the pluralisation of global knowledges. Then, within this setting of cyclical change in global research and knowledge production, what could work towards going against the existing dominance and making the research space more plural? This working paper highlights the role of agency in making a difference in this regard. The following discussion will elaborate on this matter.

Agency and actors in global research and knowledge production

Global research space is in constant change, but change does not occur by itself. Agency and actors in the unequally positioned global research space are crucial to comprehend the ontological openness of the constant change. Agency in research space means freedom to achieve whatever the actors in research space, such as persons, institutions and national and supra-national actors decide to achieve as responsible agents, building from Sen's earlier influential definition (1985). This definition of agency in research space signifies (a) actors and (b) multi-scalarity in research space as important components. Indeed, actors in research space operate at multiple scales and their impact at any scale cannot be neglected.

This working paper argues for multiple actors within six scales to highlight their roles in shaping global research: individual, institutional, local, national, regional and global, as elaborated in Table 1. As the table illustrates, actors in global research space shape the global research system and hegemony, but all with different main drivers, working dynamics and normative centres. The actors at the different scale can enable each

other, but can also become the 'structures' hindering agential activity of different actors (c.f. the row on 'How this scale affects the other scales' in Table 1).

Among these scales, the individual scale (e.g. Kwiek, 2021; Wagner, 2018), the national scale and the global scale (e.g. Marginson, 2018; Oldac, 2023) are most visibly discussed in the literature. The regional aspect is also increasingly discussed (Marginson, 2022; Robertson et al., 2016). All scales need to be taken into account to provide a full picture, even though specific studies may choose to focus on a few the scales for their purposes.

As Table 1 demonstrates, the global scale is the largest scale in research and knowledge production. It is hard to control it because it primarily operates through increasingly open networks, although some nodes at each level are more central than others, indicating some hierarchy (Wagner, 2018). Hence, although the global scale has no declared normative centre, Anglo-European systems tend to have a more normative position.

The national scale has the nation-state at their normative centre. The national level research actors work in dynamic diffusion with the local, institutional and other scales. They provide the legal, political and financial conditions for research. National-level actors have the potential to hold a strong role in what is researched and what is not.

The individual scale, which includes researchers and scholars, is the smallest scale in the global research system. They collectively make up the larger scales, empower themselves and sometimes hinder each other. They exert agency to maximise their prestige (Kwiek, 2021) and to build networks to support their research by sharing expertise and equipment (Wagner, 2018). An example on how the individual-level agency can be conditioned by the institutional or the national scale could be that if individuals are positioned in non-zero sum situations, they will tend to collaborate more, but if their promotion or other incentives are positioned as a zero-sum game ('only one of you will be tenured!'); then, competition and becoming the 'structure' for another's agential actions may become a matter. Collaboration and competition are important topics for discussion, but they are not the core foci of this working paper. They are already elaborated well elsewhere in the literature (see Powell, 2018).

Table 1. Actors in the multiscalar research space

Scales	Individual	Institutional			Local	National	Regional	Global
Actors	Researchers; scholars	Universities, research institutes	Commercial entities, such as ranking institutions and bibliometric institutions	Philanthropist institutions	City and provincial level research regulation bodies, knowledge hub cities (e.g., Singapore)	Nation-state, national regulatory authorities, national funding agencies	Regional-level actors that go beyond nations (e.g., EU, ASEAN, ASED)	A dynamic network of scientists encompassing all actors at various scales
Main drivers	Personal curiosity and fulfilment, prestige, contribution to science and humanity	Contribution to science and humanity, impact maximisation, going up the rankings	economic gain, prestige	Societal impact, solution of social problems, improving their reputation	Addressing local needs and issues, becoming a hub for talented research individuals, global prestige of the locality, serving the nation (and sometimes the globe)	Prestige, contribution to science and humanity, addressing national priorities (e.g., STEM) and needs	Increasing cooperation, cost-sharing of science, talent-pooling, capacity building for lagging members, increasing soft power of leading member states	The global is an action space of actors at various scales, thus the driving forces of the actors in the multiscalar science system as a whole drive global science
Working dynamic	They research topics that are of interest to them and/or topics they have funding for and build collegial scientific networks.	They may fund and facilitate scientific endeavours with their resources and facilities. They may also confine researchers (e.g., the wrestle between admin and academics, managerialism,	They may influence and reinforce the perceived hierarchy in science and what is included (and thus what is excluded) in science	They may fund and/or provide facilities & equipment for research they see beneficial and interesting. Their confining power is limited	Working in dynamic diffusion with the national scale and answering to local stakeholders. They sometimes are (esp. global cities) in dynamic connection with the regional and global.	Working in dynamic diffusion with local. Provides the legal, political and financial conditions for science. Has the potential to hold a strong role in what is researched and what is not.	Sovereign member-states work together through coordinating institutions (e.g., the ASEAN secretariat). The scales to the left can all contribute to the scientific endeavours at this scale	Global level is hard to control/ hegemonise as it primarily operates through increasingly open networks, although some nodes at each level are more central than others, indicating some hierarchy.

		precarious working environment, universities following national agendas)		compared to other institutional actors, such as universities.				Still, actors are increasingly pluralising and diversifying.
Normative centre	They are the essential and the smallest component of the multiscalar science space	Institutional administration team, university presidential team	Institutional administration team	Board of trustees, individual philanthropists (e.g., Soros for Open Society Foundation)	Municipalities, local administration	Nation-state	The shared consensus of sovereign member nation-states	No declared centre, but Anglo-American systems tend to have a more normative position
How this scale affects other scales	Together they form and actively participate in all the other scales to the right. But they are also affected by them through regulations, cultural norms and collegial responsibilities. They are also the main actors forming collaboration networks.	They are the immediate locations for scientific endeavours and outputs. They can also be spaces where power struggles or political rivalries of other actors in science space.	They have the power to shape the perceptions of scientific quality, hierarchy, and inclusion/exclusion.	They have the power to steer actors at different scales through their financial and political means.	Local resources (i.e. funding), institutions and personnel can play a role in shaping the national and, through it, the larger scales. It may have a more direct effect on the institutional and individual scales immediately inside it.	National resources (i.e. funding), institutions and personnel can play a substantial role in shaping science space at all scales	Region is not a strong actor everywhere. The EU and ASEAN seem to be hitherto the most influential ones. Their resources, institutions and personnel play a role in shaping all the scientific endeavours and outputs to the left directly and also the global scale	All the actors in the multiscalar science space are increasingly connected and integrated at a stronger level. Actors co-create global values and norms and are affected by them. Some actors are more influential than others, but the collective nature is still there.

Retrieved from Oldac & Yang (2023, p.3)

Can international research collaborations be manifestations of agency in global research?

The question in this section title is a query my colleagues and I have set out to answer in our ongoing projects and recent publications (e.g. Oldac, 2023; Oldac et al., 2023; Oldac & Yang, 2022, 2023; Yang, Li, et al., 2023; Yang & Oldac, et al., 2023). The term 'inter-national' acknowledges the influence yielded by the national container. National level actors have certain tools, such as visa regulations, policy supports/restrictions and funding power, that help them yield influence on global research and international collaborations. As Table 1 above highlights, global research connectivity is hard to hegemonise, but there are more central nodes which have the potential to become gatekeepers for international research collaborations. To illustrate, the highlighted tools can impact research actors joining important knowledge exchange activities such as conferences, decide on which collaborations are funded or limited and influence which collaborative research gets into codified knowledge in established journals through holding the editorial boards.

The structural forces at play at the national level highlighted in the previous paragraph is to acknowledge the power dynamics in the fuller picture, but in no way to underestimate the agency of individual researchers or other research actors. There are already indications that international research connectedness is becoming less hierarchical and more open (Wagner et al., 2015). This means that there is an increased space for agency of actors to operate at different scales.

Given the unequal nature of global research and actors shaping international flow of collaborations, can international research collaborations, especially those happening outside the Global North/West sphere, be manifestations of agency? Some collaborations are easier and comes more 'naturally'. Global North-North collaborations are good examples of this. To illustrate, the collaborations among the UK and the US is relatively easy: same language, shared dominant epistemological systems, more availability of funding to travel and collaborate, and no visa restrictions.

By contrast, international research collaborations become more challenging especially when the collaborators are coming from the Global South: they speak different languages, have different epistemological systems, have limited funding and face travel restrictions needing visa (even worse, their countries may be in the banned list from travelling despite individual researchers having visas (e.g. Associated Press, 2023)). South-South collaborations and possibly South-North (South is written first on purpose) collaborations are not that easy. The highlighted structural factors require an immense agential effort from all actors in research space at different levels. Figure 1 below provides a developing conceptualisation of agency in international research collaborations that incorporates the highlighted agency-structure dynamic and includes how agential manifestations may play a role in this.

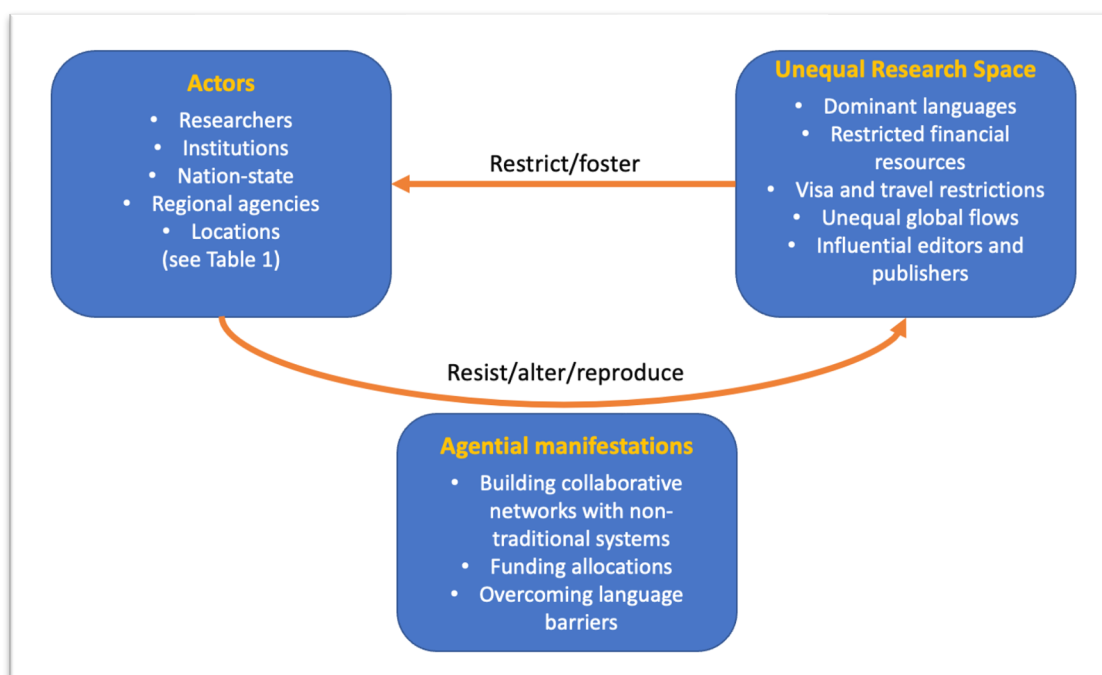


Figure 1. A developing conceptualisation of agency in international research collaborations

The argument on agency in international research collaborations cannot be positioned in a one-sided manner. Collaboration, by definition, is only possible when at least two sides are working together. To illustrate, a recent study of mine indicated that there is a strong increase in collaborations between Muslim-majority research systems and the Chinese research system (Oldac, 2023). Is this happening because of the efforts of only one side? Or both? It is likely that

the latter is the case. There will be more work on this topic in an upcoming funded project on research publications and collaborations in South-East Asia².

Concluding remarks: Working towards Pluralisation in research space

As highlighted earlier, global research and knowledge production is diversifying, as more and more small to medium systems are contributing to global codified research (Marginson, 2021; Oldac, 2022). However, more systems contributing to global codified research does not equal to pluralisation of global research and knowledge production. In the globally unequal research system, we need to go a step ahead and work towards pluralisation of epistemologies and intellectual traditions. Scholars of global research and knowledge production should be conscious about epistemic inequalities and work towards making the research space more plural, going against any hegemony.

Khaldunian theory of cyclical change and agency of knowledge actors at multiple scales provide important tools for exploring the unequally-situated global research and knowledge production. I acknowledge that these conceptual tools need further developing, hence the 'working paper' nature of this publication. Future research can build on these conceptual tools and develop them further with empirical data.

These conceptual tools could be especially useful when examining emerging research systems of the Global South. In the times of change and diversification of global research space, agency and theories of change are important. These conceptual tools are employed in two upcoming projects, both introduced in the following two subsections. The first one is the rapidly developing knowledge production and international research collaborations in Southeast Asia, which is dwelled on in the next section.

² https://cerg1.ugc.edu.hk/cergprod/scrrm00542.jsp?proj_id=13601523&old_proj_id=23601523&proj_title=&isname=oldac&ioname=&institution=&subject=&pages=1&year=&theSubmit=13601523

Knowledge production and international research collaboration in Southeast Asia

Southeast Asia is a fast-developing region of the world. Ten nations in this region now make up the Association of Southeast Asian Nations (ASEAN), which was established in 1967 with strong intentions of fostering regional peace and enhancing cultural and economic development. With a population of over 680 million people, ASEAN member states comprise a substantial portion of the global population, and their growing economic footprint impacts the surrounding nations through partnerships.

ASEAN nations are collectively building an increasingly harmonious research system, as indicated in the ASEAN Work Plan on Education adopted in May 2021. There is much potential in the region and recent research indicates that ASEAN researchers are increasingly collaborating with each other (Oldac & Yang, 2023). As indicated earlier, North-North and North-South collaborations are still important but South-South or South-North (commenced from South) collaborations make a long-term sustainable impact in the emerging research systems. These are indications of agency, enacted at regional, national and local levels.

However, despite its recent development, ASEAN research system remains a non-central player in the 'centre-periphery' global science system. The research system and knowledge production in Southeast Asia is set to have further developments in terms of newly established connections with the systems of other countries and further harmonisation within the region. Khaldunian theory of change, as explained earlier in this paper, can play a role in the conceptual analysis of the rise of the research and knowledge production in Southeast Asia. The literature has not adequately investigated the current state and development of this emerging region's knowledge production.

There is a great momentum for partnerships and increasing collaboration within the region. However, the current developments largely focus on mobility of peoples, compatibility of higher education systems through credit transfer systems, internationalisation of curriculum and teaching, and transnational education (Lim et al., 2023; Tran et al., 2024). It would be very timely to look at the research aspect of these internationalisation and regionalisation efforts.

Knowledge production and epistemologies in the Islamic scholastic system

Beyond international research collaborations, the proposed conceptual tools can also be useful in examining epistemologies of knowledge production. The way knowledge is perceived and produced may differ from one intellectual tradition to another. Global research is mostly discussed from the lenses of Global North. Other epistemological traditions, including Chinese (Yang (杨锐), 2023), South American (Santos, 2016) and Islamic scholastic lenses (Alatas, 2006; Şentürk, 2022), are mostly underrepresented in global research system.

Hegemony and dominance in global research and knowledge production must be acknowledged because otherwise we always have an incomplete picture of the globe. A good example of the 'incomplete picture' argument is the use of the term 'Dark Ages'. The term 'Dark Ages' is sometimes used to denote lack of advances in civilisation and science in the whole of the Middle Ages from around a.d. 476 to the Renaissance³. However, this is a highly Euro-centric term that is simply not describing what was happening in other parts of the world at that time. Cross-cultural developments in the science of medieval times were thriving in the Islamic world (Sezgin, 2008), when the 'West' was going through Dark Ages. Scholars argue that a large chunk of cross-cultural scholarship was led by Arabic as the lingua franca and stretched from the Nusantara to India to all the way to the Spain (Şentürk, 2022).

A main difference in those times from today's modern world is that scholarship has never been as global as it is now, which helps the quick spread of the hegemony of the current dominant Global Northern/Western epistemology. To illustrate, the months-long sojourns of Muslim scholars (such as al-Khwārizmi or al-Farabi) from one higher learning institution to another would not be necessary now. Neither travelling is as long and complicated, nor the communication is as challenging and time-consuming. Thanks to technological advances in telecommunication and travelling (e.g. commercial planes and trains), the strong dominance of English and the epistemologies of the Global North/West has become a reality.

³ According to Dictionary.com which uses Oxford English Dictionary database: <https://www.dictionary.com/browse/dark%20ages>

In today's world, Muslim-majority research systems can be best described as emerging. They had a late start in the Western-dominated global research system, but their rise is at striking levels (Oldac, 2022). When examined by total research output numbers, some of the Muslim-Majority science systems are fastest rising globally (Marginson, 2020). They are not only rapidly increasing the quantity of their publications but also the quality, as measured in several scientometric proxy terms (Oldac, 2022). Such a rise in the research systems may bring certain developments for the Islamic intellectual traditions. However, these societies currently mostly follow the dominant paradigms of Global North/West in their knowledge production. The path they follow is worth studying with the conceptual tools of agency and the Khaldunian theory of change.

Limitations

Although this working paper did not distinguish between different areas of research, such as natural sciences or social sciences, the arguments put forward here may apply more for humanities and social sciences research.

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