Resisting Digital Coloniality: Exploring Technology Innovation in Global South Countries for Social Transformation

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ABSTRACT

Globalization has initiated significant changes in countries of the Global South, especially in their response to 'Digital Coloniality', where corporations from the Global North control the dominance of digital resources. These countries are actively working against this control, striving to establish their presence in the digital world. A key focus of this resistance is avoiding new dependencies in the digital era, characterized by the Global North's control over data, echoing a form of digital post-colonialism. This research centres on the role of Global South startups in creating social transformation through innovative approaches, emphasizing sustainability and societal impact. These startups are not just business entities but critical agents transforming local communities. The study suggests that the Global South needs to better adapt and utilize external access along with supportive governmental regulations to encourage technological innovations with valuable social impacts. This research offers insights into the evolving role of startup contributions in digital innovation, highlighting their growing influence in shaping a more equitable technological landscape and resisting digital coloniality in the Global South.

Keywords: Digital Coloniality, Global South Innovation, Startup Ecosystem Development

INTRODUCTION

Nowadays, there has been a growing concern about a new form of colonialism, often termed as 'digital coloniality', especially prevalent in countries of the Global South (Bon et al. 2021; Mann and Daly 2019). This modern iteration of colonialism mirrors the classic model, where exploitation and control are key elements, but in the current context, it revolves around data and technology (Van Den Scott and Stingl 2017). Major corporations, predominantly based in the Global North, are at the forefront of this phenomenon, wielding significant control over data and digital resources

(Kwet 2019). These corporations, reminiscent of past colonial powers, exert influence and extract value from the data generated by people in the Global South (Bon et al. 2021). This digital dominance by Global North corporations not only mirrors the dynamics of classic colonialism but also raises critical questions about data ownership, privacy, and the equitable distribution of digital benefits in our increasingly interconnected world (Birch, Cochrane, and Ward 2021).

The impact of digital coloniality on the Global South, primarily consisting of developing nations, is profound and multifaceted (Contreras and Dornberger 2023). With their expansive reach, global corporations can access and control vast amounts of data, with their innovations being widely used by the populations in these regions (Houser and Voss 2018). However, this presence often leads to the overshadowing of local industries and asserts a form of dominance that threatens these areas' economic and cultural integrity. Through their business practices, these external entities extract value from the everyday activities of people in the Global South, often without equitably contributing back to these communities (Gosain 2021).

The problem of digital coloniality in the Global South is fundamental. It makes an unequal power dynamic between the Global North and the Global South. This new form of colonialism holds back local industries, makes inequalities worse, and puts cultural diversity at risk (Van Den Scott and Stingl 2017). Digital coloniality reinforces a system of dominance where powerful tech corporations from the Global North control data and resources, leaving Global South countries disadvantaged (Bon et al. 2021). This situation limits the influence of technology use, southern countries remain dependent, and limits innovation opportunities resulting in little economic growth (Gosain 2021). Challenging these power dynamics and promoting digital technology innovation in the Global South is essential to regain control over digital resources and nurture local industries.

Understanding how important it is to innovate in digital technology is

key in fighting digital colonialism. Countries in the Global South have a great chance to create their own tech solutions (Villacis et al. 2022). These can be a momentum to gain digital independence and protect their communities. By concentrating on innovations that meet their unique needs, Global South countries can start a change that goes beyond just economic growth and leads to wider social progress. It's vital for them to embrace and develop their own technological innovations to shift the current power imbalance. This will pave the way for a more fair and balanced digital future for the Global South (Wakunuma et al. 2021)

The potential of startups in the Global South is considerable, especially in fields like healthcare, education, ride-hailing, and agritech. These startups are seeking to gain traction despite various challenges. They are pioneering new economic ecosystems and addressing community-specific societal issues. However, they also face significant hurdles and these challenges include limited access to funding, inadequate infrastructure, and a population still adjusting to digital changes (Quinones, Heeks, and Nicholson 2019). Understanding these constraints is vital to unleashing the full potential of these startups and altering the current landscape of digital coloniality.

This research looks at how local digital startups in the Global South are important, but rarely been studied. It focuses on how they affect society, especially with the issue of digital coloniality. Even though they are often overlooked because of the tech power of the Global North, these startups are really important for growing the economy and making social changes. They offer key insights into how local innovation can reduce dependence on foreign technology by providing solutions that are not only affordable but also tailored to meet specific regional needs. This research adopts a qualitative approach, blending post-colonial and innovation theories, to thoroughly understand this dynamic and focus on how startups in the Global South navigate the complexities of being under the technological shadow of the Global North. This study focuses on some startups, showing how they are dedicated to solving

social problems. It highlights how technology can be really helpful, making life better and leading to good changes. These companies go beyond just developing technology; they confront unique social and economic issues in their areas with inventive solutions that fit the needs of their people. Local startups are starting to compete with big tech companies, making the market fairer for both sides. This growth of local businesses is important for the Global South to have more control over their digital presence.

RESEARCH METHOD

This research adopts a qualitative approach to explore the role of local startups in the Global South, specifically focusing on their impact on digital coloniality. The study will use a combination of case studies, semi-structured interviews, and thematic analysis to gain a comprehensive understanding of the dynamics at play. Case studies will be selected from various sectors such as healthcare, education, ride-hailing, and agritech, chosen for their innovative approaches to addressing local issues. Semi-structured interviews with startup founders, employees, and industry experts will provide in-depth insights into the challenges and strategies of these businesses. Thematic analysis will be employed to identify recurring patterns and themes related to digital coloniality and innovation. Additionally, the study will incorporate post-colonial and innovation theories to frame the findings within the broader context of global power dynamics and technological advancement. This methodology aims to reveal how local startups not only offer tailored solutions to regional needs but also contribute to reducing dependence on foreign technology, thereby challenging the existing digital dominance of the Global North.

RESULT AND DISCUSSION

In today's world, digitalization brings an abundance of facets, including the Internet of things, big data, cloud computing platforms, and other cyber-physical systems, which has fundamentally altered how social aspect are

structured, how they collaborate and think, including how equipment is built and maintained (Tronvoll et al. 2020). The emergence of data particularly has become incredibly valuable, just like a new form of currency (Eggers, Hamill, and Ali 2013). When we go online, we generate much data without realizing it. This data includes the websites we visit, the things we search for, and even personal information like our names and addresses (Johnson, Jungbauer, and Preuss 2021). As Hinings argue that the core of digitalization is the transferability of any object as data which enabled and constrained by human actions (Hinings et al., 2018). The big tech companies, especially those from the Global North countries, have special technologies to collect and use this data (Tronvoll et al. 2020). They track our online behaviour and gather information about us to understand our preferences, interests, and behaviours. With this knowledge, they can show us personalized ads that will grab our attention and make us want to buy things. It is like they have the power to influence our choices and behaviour. We call this kind of dominance and control over data by Northern tech companies' digital coloniality (Coleman 2019). It is similar to how powerful countries colonized and exploited other countries in the past. In this case, foreign powers dominate and exploit the digital landscape of countries in the Global South. They extract and control data from individuals without their knowledge or consent, using communication networks they develop and own (Botta and Wiedemann 2023). It is a modern form of colonization where the Global South countries are at a disadvantage and need more control over their digital resources.

Digital coloniality involves different groups of actors that contribute to its perpetuation. Big companies create the technology and systems that collect data from people in the Global South. Our online activities and personal information are collected to build their business basis data. Advertising and consulting firms also play a significant role in digital coloniality. They use the data collected by tech companies to target specific groups of people with personalized ads. By analyzing our data, they learn about our likes, behaviours,

and interests, which helps them create ads that are more likely to catch our attention and make us want to buy things (Johnson, Jungbauer, and Preuss 2021).

This data is precious in Global South countries, with many people and growing markets. Smartphones, tablets, and social media have made it possible for companies to reach and advertise directly (Johnson, Jungbauer, and Preuss 2021). They can target with ads specifically tailored to people interests and needs. This gives them control over the market and allows them to make money by selling or using the data to targeted advertising. They use artificial intelligence, a technology that can learn and make predictions based on data. It helps them understand people behaviour and even predict what they might do (Pratika 2023).

Beside data privacy, the Global South faces several challenges in resisting digital coloniality. One major challenge is the monopolistic market position of big tech companies based in the Global North (Conyon et al. 2022). These companies have a dominant hold on the digital landscape, making it difficult for local tech industries in the Global South to thrive. These challenges contribute to a digital colonial dynamic where people in the Global South depend on big tech platforms without any need or mechanisms for holding them accountable. This imbalance of power allows for the extraction of data and the exploitation of individuals' information in the Global South (Bon et al. 2021). To overcome these challenges, it is essential to focus on promoting competition and creating an environment that supports the innovation and development of local tech industries in the Global South. This means encouraging the growth of homegrown companies that prioritize the rights and needs of the people in these regions. Encouraging competition among tech companies is important to break the dominance of big tech giants and give users more choices (Wakunuma et al. 2021).

Supporting local startups and their innovative ideas in the Global South is crucial for creating a fair and inclusive digital world. These startups are

essential for the economy and for bringing positive changes to society. They not only focus on developing new technology but also on solving social and economic problems that are specific to their own countries and regions. They understand their communities' unique challenges and concerns and work on finding creative solutions. This helps their communities and makes a positive impact (Quinones, Heeks, and Nicholson 2019). Supporting local startups also helps countries in the Global South to have more control over their digital resources. It means they rely less on technology and platforms from other countries, allowing them to develop solutions that fit their values and priorities. This independence allows them to shape their future in technology and keeps the economic benefits within their communities. They also contribute to preserving and celebrating the diversity of cultures, as their products and services are designed to respect and represent the unique identities and perspectives of the Global South. It gives people more choices, encourages innovation, and allows countries to control their digital future.

GLOBAL SOUTH TECH INNOVATION: SEVERAL DIGITAL STARTUP TO ADRESS SOCIAL ISSUES

In an era where technology has become increasingly intertwined with our daily lives, it is crucial to recognize the transformative impact of Global South startups leveraging innovation to address pressing social issues. These companies are challenging the status quo and reshaping their respective industries by harnessing the power of technology for the betterment of their communities.

Grab, a leading ride-hailing and transportation platform in Southeast Asia, has significantly transformed how people in the region travel and commute. By harnessing advanced technology, Grab has streamlined transportation and addressed key urban challenges like congestion. Its impact extends beyond mere convenience; the platform has created economic opportunities, particularly for its drivers. For passengers, it has enhanced

mobility, offering efficient and accessible transport options. This innovation has reshaped the transportation landscape in Southeast Asia, demonstrating the power of technology in improving everyday life and contributing to the region's socioeconomic development (Kee, Mohd Rusdi, et al. 2021).

Education is another crucial sector that has witnessed remarkable transformations through the endeavours of Global South startups. Byju's, an online education platform in India, pioneered technology to make quality education accessible and affordable. Byju's innovative learning solutions, delivered through engaging digital content and personalized teaching methodologies, have effectively addressed the educational challenges that millions of students in the country face (Rajan 2022). Education platforms like Byju's in India show how technology can revolutionize learning in the Global South. These platforms are about more than just providing digital versions of textbooks or replicating traditional teaching methods online (Sebastian 2023). Byju's has managed to make learning more accessible to a vast number of students. This kind of innovation in education is vital for the Global South, as it helps bridge educational gaps and offers opportunities for learning that were previously unavailable.

In Africa, uLesson, a Nigerian ed-tech startup, is profoundly shaping the future of education. Founded in 2019, uLesson is emblematic of a new era in African education, where technology plays a central role in addressing and overcoming longstanding educational challenges (Naija 2022). The platform's mission to provide high-quality education to every learner, regardless of their background, is pivotal in a continent where access to quality education has often been uneven. By harnessing innovative technology, uLesson is not just offering digital content; it is reinventing the learning experience for African students(Johansson and Bergvik 2020). Its interactive online tutoring addresses a critical gap in the African education system—the lack of widespread access to quality private tutoring. In many parts of Africa, the traditional educational infrastructure struggles to meet the growing demand,

leaving many children without fundamental literacy and numeracy skills. uLesson's approach to this problem is innovative and inclusive, ensuring that high-quality education is not a privilege of the few but a right accessible to all (Partners 2023).

Moreover, uLesson and Byju's impact extends beyond individual academic achievement. ULesson is contributing to broader social and economic development in Africa and South Asia by equipping students with essential skills and knowledge. Educated individuals are better equipped to address local and global challenges, leading to a more informed, empowered, and productive society (Dighe 2023). The success of Education Tech Startup and its expansion beyond the region is a testament to the scalability and effectiveness of its model. It reflects a growing recognition of the importance of education as a critical driver of development in the Global South.

Healthcare is another domain that has witnessed significant advancements driven by Global South startups. mPharma, founded in 2014 and based in Accra, Ghana, represents a significant leap forward in the African healthcare landscape. As a digital health solutions provider, mPharma's primary goal is to enhance access to medications for people across Africa, embodying the principle that safe and affordable healthcare is a universal human right. The company's mission is rooted in a deep commitment to ensuring that essential medicines are both accessible and affordable to patients in need (Herzlinger 2022). The ingenuity of mPharma lies in its suite of digital solutions that streamline the pharmaceutical supply chain. This benefits the pharmacies and hospitals and ultimately contributes to more affordable medication prices for patients (Wu 2022). mPharma's vision of good health across Africa is ambitious and reflects a commitment to a future where healthcare access is not a privilege but a right. The company stands as a beacon of hope and innovation in the African healthcare system, showing what is possible when technology and a commitment to human rights converge. Through its efforts, mPharma is not only improving healthcare

access today but is also paving the way for a healthier, more equitable future across the continent (Agyeman Prempeh 2019).

The agricultural sector has also witnessed remarkable disruptions through the efforts of startups such as DeepAgro. The startup from South America is demonstrating how innovation in the Global South can significantly contribute to the agricultural sector. By integrating advanced technologies like artificial intelligence and computer vision, DeepAgro is revolutionizing traditional farming practices. Their focus on enhancing efficiency in agriculture through image processing technology is a prime example of how local startups are addressing global challenges. This leads to substantial cost savings for farmers and aligns with a broader commitment to environmental sustainability (Vega 2023). The impact of DeepAgro's innovation extends beyond the immediate agricultural benefits. It represents a significant stride in fostering a healthier society and a cleaner environment. This triple-impact approach – benefiting the economy, society, and the environment – exemplifies the potential of startups in the Global South to create comprehensive solutions that address local needs while tackling global challenges. DeepAgro is a testament to the innovative spirit and transformative potential of agritech innovations emerging from the Global South (Achard, n.d.).

Additionally, startups like eFishery in Indonesia have demonstrated how technology innovation can tackle unique challenges specific to their regions. This startup is revolutionizing the aquaculture industry, demonstrating how technology can significantly aid the Global South, particularly in sectors like farming and agriculture (Zainudin et al. 2023). Their introduction of IoT and mobile-based innovative feeding technology is a significant step towards improving efficiency and accountability in fish and shrimp farming. This innovation is crucial in Indonesia, where aquaculture is a significant part of the food supply but still needs to be heavily reliant on manual, less efficient methods. By automating the feeding process, eFishery

not only optimizes the use of feed, which is a significant cost in aquaculture, but also minimizes waste and environmental damage, a key consideration in sustainable farming practices (Wahyuni Sabran et al. 2023).

The impact of eFishery's technology on society is multifaceted: It presents an economic benefit for farmers by reducing overfeeding and feed wastage costs. This efficiency can lead to increased profits, which is a significant boost for the livelihoods of local farmers. eFishery's innovation extends beyond the technology itself (Efishery 2020). By creating a marketplace for feed and a financing service for farmers, eFishery addresses broader challenges in the aquaculture industry, such as supply chain inefficiencies and access to capital. These additional services demonstrate a deep understanding of the sector's needs and showcase eFishery's commitment to providing comprehensive solutions. As eFishery continues to expand and enhance its services, it stands as a prime example of how technological innovation in the Global South can profoundly and positively impact the economy and society (Andriani 2020).

Beyond technology which involved in specific aspect. There was Aadhaar, a digital identity platform in India which came from an from an innovation-broaden to solved several social problems that eventually play a role in several government assistance programs (social assistance) and has become a critical infrastructure for socio-economic activity in India. Aadhaar was introduced in 2009 by UIDAI, the organization set up to implement the platform, received legislative backing in 2016 and by 2019 the government had issued a 12-digit unique identity to nearly every adult resident in India compiled into a centralized database comprised of biometric and demographic data (Madon, Ranjini, and Anantha Krishnan 2022).

The stories of startups in the Global South are not just about business achievements; they are about shaping the future of societies. These startups prove the incredible impact technology can have when applied thoughtfully to meet local needs. Across various sectors, from transportation to healthcare,

agriculture, and education, they are using technology to solve pressing social issues and improve the quality of life for millions. In this movement, we see the Global South actively resisting the perspective of digital coloniality by empowering technology innovation (Villacis et al. 2022). These regions are not just passive receivers of technology from the Global North. Instead, they are creators and innovators in their own right. The Global South challenges the existing digital power structure by focusing on local needs and using technology to address them. This resistance is about gaining technological independence and rewriting the narrative of digital development to be more inclusive and representative of diverse global perspectives.

All these innovations emerge from the community, for the community, transcending beyond mere business ventures to become catalysts of social transformation. Startups like mPharma, eFishery, Grab, DeepAgro, Byju's, and uLesson are not solely focused on profit generation; they fundamentally reshape the societal fabric. By addressing specific local needs with tailored digital solutions, these enterprises actively enhance the quality of life, promote equitable access to resources, and foster an inclusive environment where technology benefits all. This approach represents a paradigm shift, where business objectives align seamlessly with societal advancement, creating a model for sustainable and socially conscious entrepreneurship. These startups exemplify how commercial success and social impact coexist, demonstrating that economic growth and societal progress are not mutually exclusive but can be pursued for more significant collective benefit (Wakunuma et al. 2021).

Furthermore, by developing and implementing localized solutions, these companies assert local communities' importance and capability in driving technological advancement and social change. This is a crucial counter-narrative to the traditional dominance of the Global North in the digital sphere. The Global South is not just a consumer of externally developed technology but a vibrant hub of innovation, creating and leveraging digital tools that serve its unique needs and aspirations. This shift is creating momentum for social

transformation, bridging the digital divide, and ensuring that technology is a tool for empowerment and progress. In essence, these startups are not only contributing to the economic and technological landscape. However, they are also pivotal in rewriting the global narrative of digital innovation, where local voices and needs take centre stage in shaping a more equitable digital future.

ACCELERATING DIGITAL INNOVATION IN THE GLOBAL SOUTH THROUGH EXTERNAL ACCESS

The burgeoning success of startups in the Global South, particularly in the realm of digital innovation, can be significantly attributed to the funding and support received from the Global North. This cross-continental financial collaboration has been a catalyst for transformative change, allowing startups in less developed regions to transcend local limitations and scale up their technological solutions (Bowser et al. 2014). Funding from the Global North has not just provided the necessary capital for these startups to develop and refine their products; it has also opened doors to valuable networks, mentorship, and global market insights. This influx of resources and knowledge has been instrumental in enabling startups to navigate the complex landscape of technological innovation and to compete on a global stage(Simpkin et al. 2019).

The impact of this funding extends beyond the immediate success of individual startups. It represents a broader shift in the dynamics of global economic development, where the traditional boundaries of innovation are being redrawn. By investing in the Global South, entities from the Global North are facilitating a more inclusive and diverse technological landscape. This support is crucial in democratizing technology innovation, ensuring that the benefits of digital advancements are not confined to developed countries but are shared globally. Moreover, these investments are often aligned with the pursuit of sustainable and socially responsible development goals, thereby reinforcing a global commitment to tackling pressing societal challenges

through technology (Prasad et al. 2023).

Grab's journey since its inception in 2012 illustrates a compelling case of how Global North investment has played a pivotal role in the growth and success of a startup in the Global South. With over US$14 billion in total funding, Grab stands as one of Southeast Asia's most well-funded startups, a testament to the significant interest and confidence global investors has in the region's market potential (Grab 2019). The influx of capital from major investors like SoftBank Vision Fund, Tiger Global Management, GGV Capital, and others underscores a broader trend where companies from the Global North are increasingly recognizing and investing in the burgeoning potential of markets in the Global South (Kee, Rusdi, et al. 2021).

The investment in Grab by these global entities is not merely financial; it's a strategic endorsement of the startup's business model and its market approach. This funding has enabled Grab to expand its services, invest in new technologies, and increase its market presence across Southeast Asia. Moreover, these investments from the Global North bring more than just capital. They also bring a wealth of experience, global business networks, and technological expertise, which can be invaluable for a growing company in a competitive sector like ride-hailing and financial services. For Grab, this means an opportunity to leverage these resources to innovate, scale up rapidly, and compete not just locally but on a global stage (Putri, Amin, and Warjio 2022). Furthermore, the story of Grab and its investors reflects a larger narrative about the dynamic interplay between the Global North and South in the digital economy. It highlights how startups in the Global South, with the right blend of innovative business models and strategic partnerships, can attract significant international investment (Arif Budiansyah 2020). This not only bolsters the startup ecosystem in the region but also contributes to economic growth, job creation, and technological advancement. Grab's success story, fueled by Global North funding, is a clear indicator of the growing importance of the Global South in the global digital landscape. It shows that with adequate

support and investment, startups in emerging markets have the potential not just to succeed locally, but to become major players in the global economy (Alia, Suyanto, and Dugis 2020).

The investment trajectories of Byju's and uLesson, two prominent edtech startups from the Global South, offer insightful case studies into how global funding from the North has catalyzed significant advancements in the educational technology sector (Sebastian 2023). Byju's, with its extraordinary journey in securing over $5 billion in funding, and uLesson, having raised $33 million, both illustrate the pivotal role of international investment in propelling the growth of startups in emerging markets.

Byju's, an Indian startup, has attracted a diverse range of investors, including Sequoia Capital India, the Chan Zuckerberg Initiative, General Atlantic, Tencent, and BlackRock. This international backing has provided more than just financial resources; it has brought a wealth of expertise, market insights, and strategic guidance. These resources have been instrumental in Byju's rapid scaling, enhancement of its product offerings, and consolidation of its leadership position in the edtech space (Rajan 2022). The confidence shown by these global investors in Byju's underscores the attractiveness of innovative ventures in the Global South, signaling a recognition of their potential to yield lucrative returns and make substantial impacts in their respective domains. Similarly, uLesson, an African edtech platform, has successfully navigated its funding journey with significant contributions from TLcom Capital, Prosus Ventures, Tencent, Tiger Global Management, and others (Jackson 2021). The progression from seed funding to Series B rounds reflects a growing investor confidence in uLesson's business model and its potential to revolutionize the educational landscape in Africa. The investment by these global entities not only infuses uLesson with the necessary capital to expand its operations but also aligns it with global educational standards and technological advancements (Akogun et al. 2020).

The funding history of mPharma, a healthcare startup in the Global

South, is a testament to the growing trend of investment from the Global North in businesses that are making a real impact in developing regions (Ohia, Ongolo-Zogo, and Fawole 2021). Since its inception in 2013, mPharma has attracted significant attention from international investors, including the World Bank's IFC Ventures, Norway's Norfund, Sweden's MHO Capital, and the US-based GSV Ventures. The latest $50 million raised in its Series E round in October 2022, although from undisclosed investors, further underscores the confidence global investors have in mPharma's mission and business model (Mutisi 2023).

The involvement of these Global North entities in funding startups like mPharma represents a broader shift in the dynamics of global economic development. The support from these international investors goes beyond mere financial transactions; it is a commitment to fostering positive societal change (Faheem and Dutta 2023). By investing in startups that address critical social issues, these Global North investors are contributing to a more equitable distribution of resources and opportunities worldwide. Their involvement in the Global South not only accelerates the growth of impactful startups but also aligns with a larger vision of sustainable and inclusive global development. This synergy between the resources of the Global North and the entrepreneurial spirit of the Global South is paving the way for a future where innovation and impact know no geographical boundaries.

The dynamic between the Global North's funding and the growth of startups in the Global South is a crucial aspect of modern economic development. This relationship is more than just a financial transaction; it is a transformative force. Without the investment from wealthier countries in the Global North, many of these promising startups might struggle to progress, unable to harness their full potential or make a substantial impact (Bugge, Berg, and Tømte 2023). This financial support from the Global North is pivotal for the evolution of the startup ecosystem in the Global South. Despite having innovative solutions and a keen understanding of their local markets, startups

in less developed regions frequently find themselves hampered by limited access to the kind of substantial capital necessary for global scaling. The Global North economies, with their mature financial markets and wealth of venture capital, are critical in bridging this funding gap. Their investments do more than just provide monetary aid; they lend credibility to these startups' visions and business strategies, unlocking further opportunities for growth, collaboration, and market expansion.

The synergy between the financial resources of the Global North and the entrepreneurial spirit of the Global South is not just advantageous but essential for the flourishing of a global startup ecosystem. This collaboration is key to unleashing the enormous potential within the Global South, transforming not only the startups they finance but also contributing to the economic and technological uplift of entire regions. This interdependent relationship highlights the importance of shared global prosperity, recognizing that the advancement of the Global South is integral to global economic progress. It's a powerful partnership, driving innovation, fostering social change, and leading the way towards a more inclusive and interconnected world where progress and prosperity are shared across borders.

RESISTING DIGITAL COLONIALITY AND AVOIDING NEW FORMS OF DEPENDENCY IN GLOBAL SOUTH INNOVATION

The expanding internet access in the Global South has opened a window to the world, allowing communities to observe and learn from the digital ecosystems developed by advanced countries. These ecosystems are not just technological marvels; they are tools that address social issues and improve lives. As internet penetration grows, people in the Global South gain unprecedented insight into how technology can be harnessed for societal benefit. This exposure is crucial, as it showcases the potential of digital solutions to solve real-world problems, providing a blueprint for how

technology can be integrated into everyday life to make it better (Rosa 2021).

This widespread access to information is empowering the Global South. Local communities are not just passive consumers of information; they are using these insights to spark new perspectives and create technology solutions tailored to their specific needs. This innovation is driven by the concerns and experiences of startup founders who are intimately familiar with the challenges faced by their communities. By observing the gaps and issues prevalent in their societies, these innovators are inspired to develop technologies that address these unique local problems. It's a process of learning, adapting, and then innovating, leading to the creation of solutions that are deeply rooted in the context and needs of the Global South (Kshetri 2017).

Ultimately, this leads to the creation of specific technology platforms that are imbued with local wisdom and relevance. These platforms represent a shift away from dependency on Global North technologies. Innovators in the Global South are not just replicating what exists; they are building new, contextually relevant technologies that resonate with their communities. This shift is pivotal in resisting digital coloniality. By developing their own technology solutions, the Global South is not only addressing its unique challenges but also asserting its independence in the digital world. This is a crucial step towards technological sovereignty, where the Global South moves from being mere consumers to creators and innovators in their own right, shaping a digital future that reflects their values and needs.

In resisting digital colonialism, a post-colonial perspective in the modern era offers a critical lens. This viewpoint acknowledges the historical context of colonialism and its continuing impact on power dynamics and knowledge production. In the realm of technology, it challenges the notion that innovation and expertise are predominantly the domain of the Global North. By embracing this perspective, the Global South is not only countering the narrative of technological dependency but also reclaiming its role in the global

digital narrative (Sharma and Dahlstrand 2023). This approach involves recognizing and valuing local knowledge and perspectives as equally significant in the technological realm. It's about breaking away from the legacy of colonialism, which often positioned the Global South as technologically inferior or dependent (Dlamini 2019). Instead, this modern post-colonial stance empowers the Global South to assert its technological agency, producing innovations that are not just local adaptations of Global North technologies but are original, contextually grounded contributions to the global tech ecosystem. This shift is pivotal for a truly diverse and inclusive digital future, where innovation is democratized and reflective of a multitude of experiences and perspectives across the globe.

Let see how is the Uber's strategic withdrawal from Southeast Asia, marked by selling its business to Grab (Pham 2018), signifies a pivotal moment in the region's digital landscape. This move, on the surface, appeared as a straightforward business decision but delves deeper into the narrative of resisting digital coloniality. The rise of local ride-hailing apps like Grab and Go-Jek in Southeast Asia epitomizes how regional startups can not only compete but also outperform global giants (Kee, Rusdi, et al. 2021). These local companies understood the unique needs and cultural nuances of their markets, something Uber, with its more uniform, global approach, struggled to grasp fully. This understanding allowed them to tailor their services to local preferences, proving to be more effective than the one-size-fits-all strategy often employed by multinational corporations. The success of Grab and Go-Jek against Uber is not just a business triumph; it's a manifestation of the Global South's ability to resist digital dominance by the Global North, showcasing the potential of local solutions in a globalized tech landscape (Lazuardi and Sukoco 2019).

In the face of digital coloniality, the financial support from the Global North is a critical catalyst for the Global South's technological and entrepreneurial growth. This collaboration is essential, yet it's crucial to

approach it with an awareness of the historical imbalances it might echo. The Global South, historically on the receiving end of unequal power dynamics, now faces a similar scenario in the digital realm. The dominance of the Global North in technology and funding can potentially continue these imbalances, creating a dependency that hinders true technological autonomy. Therefore, while this support is invaluable for nurturing innovation and economic growth in the Global South, it must be managed with a keen eye on maintaining independence and avoiding new forms of digital colonialism.

Local educational apps such as Byju's in India and uLesson in Nigeria are prime examples of how intimate local knowledge leads to more relevant and impactful educational content. These platforms, born out of a deep understanding of the societal needs and educational gaps within their communities, offer tailored solutions that global North education apps often fail to provide. Byju's and uLesson have the advantage of cultural familiarity—they understand the specific educational challenges, language nuances, and learning styles prevalent in their regions. This insight allows them to create content that is not only more engaging for local students but also addresses the areas where these societies need the most improvement. Unlike their global North counterparts, which often come with higher prices and a one-size-fits-all approach, these local apps deliver affordable, custom-tailored educational resources. Their success in the market is a testament to the effectiveness of localized solutions in meeting specific educational needs and preferences.

eFishery, an Indonesian startup, exemplifies how deep local understanding can lead to groundbreaking innovation tailored to specific needs. The founder, attuned to the unique challenges of the local aquaculture industry, developed a technology solution that revolutionized traditional practices (Andriani 2020). eFishery's success stems not only from its innovative approach but also from the substantial support it has received from the government. The Indonesian government's role in nurturing this startup

has been multifaceted, encompassing funding, policy support, and direct assistance. This governmental backing is pivotal in ensuring the sustainability and growth of eFishery. By recognizing and supporting such innovations, the government demonstrates a commitment to fostering a conducive environment for local entrepreneurs. This support is crucial in amplifying the impact of startups like eFishery, enabling them to scale their solutions effectively and contribute significantly to the industry's modernization. The collaboration between innovative startups and government bodies showcases a model for success, where local insights and government support come together to create sustainable and impactful technological solutions (Wahyuni Sabran et al. 2023).

To resist digital coloniality effectively, the Global South must use this funding to forge its own path in technology and innovation. It's about transforming from being mere recipients of technology and financial aid to becoming creators and innovators in their own right. This shift is vital for breaking free from the shadows of digital colonialism. It entails developing technologies that resonate with local needs and contexts, fostering a digital ecosystem that is self-reliant and reflective of the unique challenges and opportunities in these regions. The goal is to rewrite the narrative of digital development, moving from dependency to empowerment, where the Global South takes control of its digital future.

Despite the majority of funding still originating from foreign sources, local startups in the Global South maintain the right and capacity to create sustainable innovations that directly benefit their communities and foster social transformation (Volz et al. 2022). This aspect is crucial in avoiding new forms of dependency. By focusing on sustainability and societal impact, these startups are not just business ventures; they become catalysts for positive change within their societies. The ability to innovate in ways that resonate with local needs and contribute to the social good ensures that these startups do more than just succeed commercially—they play a pivotal role in shaping a

future where technology serves the many, not just the few. This approach ensures that while they may rely on external funding, they don't become dependent on external ideas and values, preserving their ability to innovate independently and in alignment with local priorities.

The dynamics of partnership between the Global North and South, along with multilateral collaborations among countries within the South, are creating a momentum for a balanced innovation ecosystem. These collaborations are crucial in establishing a balance in technological innovation and data management, ensuring that control and benefits do not remain centralized in the Global North. This shift aligns with the evolving nature of globalization, where barriers between the North and South are diminishing. The growth of local startups, armed with innovative solutions, is thinning these barriers, bridging the gap that has long existed. This trend towards a more integrated global innovation landscape suggests a future where the dichotomy between North and South becomes less pronounced, replaced by a more interconnected and mutually beneficial global ecosystem.

STRATEGIES FOR OVERCOMING CHALLENGES AND FOSTERING FURTHER INNOVATION

The startup ecosystem in the Global South faces unique challenges that require targeted strategies for overcoming them. Addressing these challenges is crucial for fostering innovation and ensuring sustainable growth. This analysis critically examines five key challenges and proposes strategies to overcome them, blending simple and advanced terminology for clarity and depth.

One of the most significant challenges faced by startups in the Global South is limited access to capital. Startups often struggle because there aren't enough local investors, and international funders have really tough requirements. To overcome this, there is a need for more flexible funding models and the establishment of local investment funds that understand the unique context of these startups. A collaborative approach between

governments and international investors is neccesity. Governments in Global South regions play a crucial role in bridging the funding gap. By establishing partnerships with Global North financiers, they can open doors for startups to access a broader pool of capital. Such collaborations are beneficial for both parties: startups gain the much-needed financial support to innovate and grow, while investors from the Global North get access to new, untapped markets in the Global South. However, for these partnerships to be effective, governments need to create a conducive environment that attracts and assures international investors. This involves implementing policies that guarantee the security of foreign investments and offering incentives such as tax breaks and simplified regulatory procedures (Gómez, Oinas, and Wall 2022).

Furthermore, local private sectors within the Global South have a significant role in complementing these efforts. By investing in local startups, they not only contribute to the financial sustenance of these enterprises but also help in understanding and solving local problems through entrepreneurial initiatives. The creativity and innovation within the Global South's startups often stem from their deep understanding of local challenges and contexts. When local private sectors invest in these startups, they fuel the development of solutions that are tailored to regional needs, thereby enhancing the overall impact of these ventures. Therefore, a synergistic relationship between governments, local private sectors, and Global North investors is essential for overcoming the funding challenges in the Global South. Such a collaboration can create a robust support system for startups, fostering an environment where entrepreneurship and innovation can thrive.

Other significant challenges are the issue of infrastructural deficits in the Global South that indeed a critical barrier to the growth and efficiency of startups. The lack of reliable internet connectivity and stable power supply undermines the operational capabilities of these startups, restricting their potential to innovate and compete in the global market. The disparity in

infrastructure between the developed and developing regions of the Global South further exacerbates this challenge. While some countries are making strides in addressing these infrastructural issues, many others remain significantly behind, lacking the basic digital and power infrastructure necessary for startups to thrive (Kayser, Telukdarie, and Philbin 2023).

Governments in the Global South must actively engage with private sector entities to drive infrastructure development. Investment in digital infrastructure, such as broadband networks and stable power supplies, is crucial. However, this requires more than just financial investment. It demands a strategic approach where infrastructure development is aligned with broader economic development goals (Quinones, Heeks, and Nicholson 2020). Governments must prioritize infrastructure as a key area for development, recognizing its role in enabling not just startups but also broader societal advancement. By improving infrastructure, governments can create an environment conducive to innovation, facilitating startups to develop solutions that address local challenges and contribute to sustainable development.

It's really vital to make it easier for startups in the Global South to grow. Right now, they face tough rules and regulations that can slow them down. Governments should make these rules simpler and more startup-friendly. This means less paperwork, clear rules, and policies that help startups, like tax breaks, easy ways to start and run a business, and protecting their ideas. Governments could also set up special areas where startups can test new ideas safely. The government plays a big role in this. They should make an environment where startups can do well and help society. They can do this by listening to startups, experts, and the public when making these policies. This way, they can make sure the rules are good and helpful, leading to a strong startup community that can solve problems and help the economy grow. Addressing regulatory hurdles is essential for fostering a conducive environment for startup growth in the Global South. Governments in

Indonesia, Singapore, and India have made commendable efforts in this regard, setting examples that can be emulated by other nations in similar economic contexts. These countries have implemented various policies to create supportive ecosystems for innovative businesses and startups (Naudé et al. 2008).

In Indonesia, the government has introduced tax and fiscal incentives for qualifying startups, including income tax reductions, import duty exemptions, and property tax reliefs. Furthermore, the establishment of business incubators and accelerators has provided startups with essential services like training, mentoring, and access to funding. Regulatory policies in Indonesia have also been streamlined to facilitate ease of doing business, including simplifying business permits and ensuring consumer data protection (Ismaya, Izdihar, and Sekolah 2020). Similarly, Singapore has adopted a proactive approach, offering tax and fiscal incentives to startups, and establishing incubators and accelerators that provide a range of supportive services. The regulatory framework in Singapore is designed to minimize bureaucratic barriers and protect consumer data, thereby creating a more startup-friendly environment (Kim, Cho, and Rhee 2020).

The strategies employed by Indonesia, Singapore, and India offer valuable lessons for other countries in the Global South. By creating a regulatory environment that supports innovation and eases the challenges of starting and running a business, these nations have significantly boosted their startup sectors. The combination of financial incentives, supportive infrastructure, and streamlined regulations has not only attracted more startups but also increased funding and economic contributions from the technology sector (Hofmann 2018). For other countries in the Global South, adopting similar policies could lead to substantial improvements in their startup ecosystems. It is critical for governments to recognize the importance of startups in driving economic growth and innovation. By prioritizing infrastructure development, offering financial incentives, simplifying

regulatory processes, and fostering a culture of innovation through events and networks, these countries can create a thriving environment for startups. Such initiatives not only benefit the startups themselves but also contribute to the broader economic and technological advancement of the society. As seen in the cases of Indonesia, Singapore, and India, a well-planned and executed strategy to support startups can lead to significant economic growth, job creation, and enhanced global competitiveness.

The model of government regulation and support for startups adopted by countries like Indonesia, Singapore, and India holds great promise and can serve as a blueprint for other Global South nations in Africa or South America. By embracing similar policies that offer tax incentives, establish incubators, streamline regulations, and promote innovation through events and networks, these countries can create an enabling environment for startup growth and technological advancement. This approach not only attracts investment and fosters entrepreneurship but also addresses critical societal challenges and contributes to economic development on a larger scale. The success stories of these Asian nations demonstrate the universal applicability of such a model in catalyzing innovation and shaping a brighter future for the Global South.

CONCLUSION

The journey of startups in the Global South, as detailed in this study, showcases a transformative movement within the global digital landscape. These startups are not mere business ventures; they are pivotal agents of social change, reshaping economies and societies through technological innovation. This transformation is especially significant in the context of digital coloniality, where the Global South has historically been positioned as a passive consumer in the global digital economy. The rise of these startups marks a shift towards technological sovereignty, where local solutions, crafted with a deep understanding of regional needs and challenges, are leading the way in addressing societal issues. This change is emblematic of a broader

movement where the Global South is actively resisting digital colonialism, asserting its role as an innovator and creator in the digital domain. The success of these startups serves as a testament to the potential of the Global South in driving global technological advancement and fostering a more inclusive and equitable digital future.

The role of the Global North in this emerging landscape cannot be overlooked. While the funding and support from advance economies have been instrumental in the growth and success of these startups, it also brings forth the importance of nurturing a balanced partnership. In this new way, everyone shares knowledge, resources, and gains fairly. This kind of partnership is key to stop the problem of digital control and make sure that help from the Global North supports the independence and creativity of the Global South. By working together like this, we can make sure that advances in technology help everyone and narrow the gap between the Global North and South.

However, the journey is not without its challenges. Startups in the Global South face hurdles like limited access to capital, infrastructural deficits, skill gaps, and regulatory barriers. Addressing these challenges is essential for sustaining the momentum of innovation and ensuring that these startups continue to thrive and contribute to their societies. The impact of these startups extends far beyond the realms of technology and business. They are at the forefront of addressing some of the most pressing social issues - from healthcare and education to agriculture and transportation. By leveraging digital innovations, these enterprises are improving access to essential services, enhancing quality of life, and fostering sustainable development. The success stories of mPharma, eFishery, Grab, DeepAgro, Byju's, and uLesson highlight how targeted, local solutions can lead to significant social and economic benefits, reinforcing the role of the Global South in shaping a future where technology serves diverse global needs.

The growth of startups in the Global South is a really positive sign and

a powerful force in the world's digital economy. It represents a shift towards a more balanced, inclusive, and equitable technological future, where the innovations and voices of the Global South play a central role. The challenges ahead are significant, but the potential for positive impact is immense. By continuing to support, nurture, and invest in these startups, and by fostering a collaborative global ecosystem, we can ensure that the benefits of digital technology innovation are shared by all, paving the way for a future where digital coloniality is a thing of the past, and where every region has an equal stake in the digital world.

BIBLIOGRAPHY

Achard, Sepehr. n.d. "Deep Agro Raises $2M for AI Agricultural Advancements." Accessed January 16, 2024. https://igrownews.com/deep-agro-raises-2m-for-ai-agricultural-advancements/.

Agyeman Prempeh, Samuel Kwame. 2019. "Improving Value Fulfillment in the Healthcare Industry; The Case of MPharma Co.."

Akogun, Isisi, Omolola Olojede, Adedoyin Adesina, and Oladele Akogun. 2020. "Education Technology in the COVID-19 Response in Nigeria." *Case Study, EdTech Hub*.

Alia, Mandra Nur, Bagong Suyanto, and Vinsensio Dugis. 2020. "Industrial Relations Dominance in the Ride Sharing Transportation Apps." *Jurnal Studi Komunikasi (Indonesian Journal of Communications Studies)* 4 (2). https://doi.org/10.25139/jsk.v4i2.2443.

Andriani, Dewi. 2020. "Kisah Sukses Gibran, Kembangkan EFishery Bisnis Pakan Berbasis Teknologi." Bisnis.Com. 2020.

Arif Budiansyah. 2020. "Tak Cuma Grab & Gojek, Startup Ini Juga Decacorn ASEAN." CNBC Indonesia. 2020.

Birch, Kean, D. T. Cochrane, and Callum Ward. 2021. "Data as Asset? The Measurement, Governance, and Valuation of Digital Personal Data by Big Tech." *Big Data and Society* 8 (1). https://doi.org/10.1177/20539517211017308.

Bon, Anna, Francis Dittoh, Gossa Lô, Mónica Pini, Robert Bwana, Cheah WaiShiang, Narayanan Kulathuramaiyer, and André Baart. 2021. "Decolonizing Technology and Society: A Perspective from the Global South." In *Perspectives on Digital Humanism*. https://doi.org/10.1007/978-3-030-86144-5_9.

Botta, Marco, and Klaus Wiedemann. 2023. "The Interaction of EU Competition, Consumer, and Data Protection Law in the Digital Economy: The Regulatory Dilemma in the Facebook Odyssey" 64 (3). https://doi.org/10.1177/0003603X19863590.

Bowser, Diana, Susan Powers Sparkes, Andrew Mitchell, Thomas J. Bossert, Till Bärnighausen, Gulin Gedik, and Rifat Atun. 2014. "Global Fund Investments in Human Resources for Health: Innovation and Missed Opportunities for Health Systems Strengthening." *Health Policy and Planning*. https://doi.org/10.1093/heapol/czt080.

Bugge, Markus M., Richard Berg, and Cathrine E. Tømte. 2023. "Transformative Innovation Policies Detached from Existing Systems of Innovation in the Global South." *Innovation and Development*. https://doi.org/10.1080/2157930X.2023.2215628.

Coleman, Danielle. 2019. "Digital Colonialism: The 21st Century Scramble for Africa through the Extraction and Control of User Data and the Limitations of Data Protection Laws." *Michigan Journal of Race & Law*, no. 24.2. https://doi.org/10.36643/mjrl.24.2.digital.

Contreras, Francoise, and Utz Dornberger. 2023. "Sustainable Entrepreneurship as a Field of Knowledge: Analyzing the Global South." *Sustainability (Switzerland)* 15 (1). https://doi.org/10.3390/su15010031.

Conyon, Martin, Michael Ellman, Christos N Pitelis, Alan Shipman, and Philip R Tomlinson. 2022. "Big Tech Oligopolies, Keith Cowling, and Monopoly Capitalism." *Cambridge Journal of Economics* 46 (6). https://doi.org/10.1093/cje/beac062.

Dighe, Satlaj. 2023. "Moving beyond Methods Training: Key Directions for Decolonizing Evaluation Education in the Global South." *New Directions for Evaluation* 2023 (177). https://doi.org/10.1002/ev.20538.

Dlamini, Sipho. 2019. "#FeesMustFall: Lessons from the Post-colonial Global South." *Journal of Student Affairs in Africa* 7 (1). https://doi.org/10.24085/jsaa.v7i1.3692.

Efishery. 2020. "Profile Perusahaan." *Efishery.Com*.

Eggers, W D, R Hamill, and A Ali. 2013. "Data as the New Currency." *Deloitte Review* 13 (1).

Faheem, Hadiya, and Sanjib Dutta. 2023. "MPharma: Health-Tech Start-up Makes Medicines Affordable and Accessible to Patients in Africa." *Emerald Emerging Markets Case Studies* 13 (1). https://doi.org/10.1108/EEMCS-04-2022-0113.

Gómez, Lucía, Päivi Oinas, and Ronald Sean Wall. 2022. "Undercurrents in the World Economy: Evolving Global Investment Flows in the South." *World Economy* 45 (6). https://doi.org/10.1111/twec.13219.

Gosain, Ashish. 2021. "Value Chains: The New Economic Imperialism." *Journal of Scientometric Research* 10 (2). https://doi.org/10.5530/jscires.10.2.42.

Grab. 2019. "Grab Mendapatkan Investasi Senilai USD 1,46 Miliar Dari SoftBank Vision Fund| Grab ID." 2019. https://www.grab.com/id/press/others/grab-mendapatkan-investasi-senilai-usd-146-miliar-dari-softbank-vision-fund/.

Herzlinger, Regina. 2022. "MPharma: Scaling Access to Affordable Primary Care in Africa - Case - Faculty & Research - Harvard Business School." 2022. https://www.hbs.edu/faculty/Pages/item.aspx?num=63061.

Hofmann, Christian. 2018. "An Easy Start for Start-Ups: Crowdfunding Regulation in Singapore." *Berkeley Business Law Journal* 15 (1).

Houser, Kimberly, and W. Gregory Voss. 2018. "GDPR: The End of Google and Facebook or a New Paradigm in Data Privacy?" *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.3212210.

Ismaya, Aisyah Assyifa Siti, Zahra Isfahani Izdihar, and Sekolah. 2020. "Urgensi Regulasi Khusus Tentang Perusahaan Rintisan (Startup) Dalam Rangka Pengembangan Ekosistem Perusahaan Rintisan Di Indonesia." *Planning, Estimating, and Control of Chemical Construction Projects* 4 (1).

Jackson, Tom. 2021. "Nigeria Ed-Tech Startup ULesson Raises $7.5m Series A Round for African Expansion - Disrupt Africa." 2021. https://disrupt-africa.com/2021/01/19/nigeria-ed-tech-startup-ulesson-raises-7-5m-series-a-round-for-african-expansion/.

Johansson, Sofia, and Isabella Bergvik. 2020. "Online Learning for Students with Limited ICT Access and Skills."

Johnson, Justin, Thomas Jungbauer, and Marcel Preuss. 2021. "Online Advertising, Data Sharing, and Consumer Control." *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.3898798.

Kayser, Kenneth, Arnesh Telukdarie, and Simon P. Philbin. 2023. "Digital Start-Up Ecosystems: A Systematic Literature Review and Model Development for South Africa." *Sustainability (Switzerland)*. https://doi.org/10.3390/su151612513.

Kee, Daisy Mui Hung, Syahidatul A'fifah Mohd Rusdi, Siti Sarah Mokhtar, Siti Aisyah Muhamad Ridzuan, and Siti Aishah Amni Abdullah. 2021. "How Grab Becomes One of the Greatest Start-Ups in South-East Asia." *International Journal of Tourism and Hospitality in Asia Pasific* 4 (1). https://doi.org/10.32535/ijthap.v4i1.1023.

Kee, Daisy Mui Hung, Syahidatul A'fifah Mohd Rusdi, Siti Sarah Mokhtar, Siti Aisyah Muhamad Ridzuan, and Siti Aishah Amni Abdullah. 2021. "How Grab Becomes One of the Greatest Start-Ups in South-East Asia." *International Journal of Tourism and Hospitality in Asia Pasific (IJTHAP)* 4 (1): 73–81.

Kim, Soyeon, Minhyung Cho, and Mooweon Rhee. 2020. "A Study on Singapore Startup Ecosystem Using Regional Transformation of Isenberg(2010)." *Asia-Pacific Journal of Business Venturing and Entrepreneurship* 15 (2).

Kshetri, Nir. 2017. "The Economics of the Internet of Things in the Global South." *Third World Quarterly* 38 (2). https://doi.org/10.1080/01436597.2016.1191942.

Kwet, Michael. 2019. "Digital Colonialism: US Empire and the New Imperialism in the Global South." *Race and Class* 60 (4). https://doi.org/10.1177/0306396818823172.

Lazuardi, Muhammad Lutfi, and Iwan Sukoco. 2019. "Design Thinking David Kelley & Tim Brown: Otak Dibalik Penciptaan Aplikasi Gojek." *Organum: Jurnal Saintifik Manajemen Dan Akuntansi* 2 (1). https://doi.org/10.35138/organum.v2i1.51.

Madon, Shirin, C. R. Ranjini, and R. K. Anantha Krishnan. 2022. "Aadhaar and Social Assistance Programming: Local Bureaucracies as Critical Intermediary." *Information Technology for Development* 28 (4). https://doi.org/10.1080/02681102.2021.2021130.

Mann, Monique, and Angela Daly. 2019. "(Big) Data and the North-in-South: Australia's Informational Imperialism and Digital Colonialism." *Television and New Media* 20 (4). https://doi.org/10.1177/1527476418806091.

Mutisi, Tapiwa. 2023. "MPharma Raises $35million in Series D Funding - Innovation Village | Technology, Product Reviews, Business." 2023. https://innovation-village.com/mpharma-raises-35million-in-series-d-funding/.

Naija, Bella. 2022. "ULesson Details the Impact of Technology on Education in Its Latest Report." 2022. https://www.bellanaija.com/2022/01/ulesson/.

Naudé, Wim, Thomas Gries, Eric Wood, and Aloe Meintjies. 2008. "Regional Determinants of Entrepreneurial Start-Ups in a Developing Country." *Entrepreneurship and Regional Development* 20 (2). https://doi.org/10.1080/08985620701631498.

Ohia, Chinenyenwa, Pierre Ongolo-Zogo, and Olufunmilayo Ibitola Fawole. 2021. "Digital Health Information Technology Utilization for Enhanced Health Services Delivery in Africa: Unravelling Barriers to Adoption among Primary Healthcare Providers." *South Eastern European Journal of Public Health* 2021 (Special Issue 2). https://doi.org/10.11576/seejph-4381.

Partners, NM. 2023. "How Learners in Nigeria Are Using the ULesson App." 2023. https://nairametrics.com/2022/09/20/back-to-school-how-learners-in-nigeria-use-technology-to-prepare-for-the-new-school-year/.

Pham, Sherisse. 2018. "Uber Quits 8 Countries in Southeast Asia, Selling out to Rival Grab." 2018. https://money.cnn.com/2018/03/25/technology/uber-grab-deal-southeast-asia/index.html.

Prasad, P. V.Vara, Nirat Bhatnagar, Vineet Bhandari, George Jacob, Kaushal Narayan, Ruben Echeverría, Nienke Beintema, Paul Farah Cox, and Julia Compton. 2023. "Patterns of Investment in Agricultural Research and Innovation for the Global South, with a Focus on Sustainable Agricultural Intensification." *Frontiers in Sustainable Food Systems* 7. https://doi.org/10.3389/fsufs.2023.1108949.

Pratika, Yeyen. 2023. "The Effect of Artificial Intelligence Utilizing in Social Media Marketing." *Jurnal Manajemen Universitas Bung Hatta* 18 (2). https://doi.org/10.37301/jmubh.v18i2.23211.

Putri, Utari Meridha, Muryanto Amin, and Warjio Warjio. 2022. "Development of Online Transportation Services: Effectiveness and Efficiency of The Grabbike Applications for Society in Medan City."

Quinones, Gerardo, Richard Heeks, and Brian Nicholson. 2019. "Digital Start-Ups in the Global South: Embeddedness, Digitality and Peripherality in Latin America." *SSRN Electronic Journal.* https://doi.org/10.2139/ssrn.3431735.

———. 2020. "Embeddedness of Digital Start-Ups in Development Contexts: Field Experience from Latin America." *Information Technology for Development.* https://doi.org/10.1080/02681102.2020.1779638.

Rajan, Thomason. 2022. "The Unusual Case of BYJU's: Creating One of the World's Most Valued Educational Technology Companies from India." *Indian Journal of Marketing* 52 (4). https://doi.org/10.17010/ijom/2022/v52/i4/163181.

Rosa, Fernanda R. 2021. "Internet Interconnection Infrastructure: Lessons from the Global South." *Internet Policy Review* 10 (4). https://doi.org/10.14763/2021.4.1583.

Scott, Lisa-Jo K Van Den, and Alexander I Stingl. 2017. "The Extension of the Coloniality of Power into Digital Culture The Digital Coloniality of Power: Epistemic Disobedience in the Social Sciences and the Legitimacy of the Digital Age." *Symbolic Interaction* 40 (1).

Sebastian, Meryl. 2023. "Byju's: The Unravelling of India's Most Valued Start-up - BBC News." 2023. https://www.bbc.com/news/world-asia-india-66126095.

Sharma, Gautam, and Åsa Lindholm Dahlstrand. 2023. "Innovations, Informality, and the Global South: A Thematic Analysis of Past Research and Future Directions." *Technology in Society* 75. https://doi.org/10.1016/j.techsoc.2023.102359.

Simpkin, Victoria, Evelyn Namubiru-Mwaura, Lorcan Clarke, and Elias Mossialos. 2019. "Investing in Health R&d: Where We Are, What Limits Us, and How to Make Progress in Africa." *BMJ Global Health* 4 (2). https://doi.org/10.1136/bmjgh-2018-001047.

Tronvoll, Bård, Alexey Sklyar, David Sörhammar, and Christian Kowalkowski. 2020. "Transformational Shifts through Digital Servitization." *Industrial Marketing Management* 89. https://doi.org/10.1016/j.indmarman.2020.02.005.

Vega, Eduardo. 2023. "Deep Agro Raises USD\$2 Million to Expand in Brazil." 2023. https://contxto.com/en/deals/deep-agro-raises-usd2-million-to-expand-in-brazil/.

Villacis, Byron, Alena Thiel, Daniel Capistrano, and Christyne Carvalho Da Silva. 2022. "Statistical Innovation in the Global South." *Comparative Sociology* 21 (4). https://doi.org/10.1163/15691330-bja10060.

Volz, Ulrich, Simon Dikau, Elena Almeida, and Nick Robins. 2022. "Scaling Up Sustainable Finance and Investment in the Global South." In *Scaling Up Sustainable Finance and Investment in the ....*

Wahyuni Sabran, Febri, Effy Zalfiana Rusfian, Magister Ilmu Administrasi dan Kebijakan Bisnis, and Fakultas Ilmu Administrasi. 2023. "Penggunaan Internet of Things Pada EFishery Untuk Keberlanjutan Akuakultur Di Indonesia." *Innovative: Journal Of Social Science Research* 3 (2).

Wakunuma, Kutoma, Fabio de Castro, Tilimbe Jiya, Edurne A. Inigo, Vincent Blok, and Vincent Bryce. 2021. "Reconceptualising Responsible Research and Innovation from a Global South Perspective." *Journal of Responsible Innovation* 8 (2). https://doi.org/10.1080/23299460.2021.1944736.

Wu, Yifei. 2022. "MPharma - Is a Platform Model Always Successful? - Digital Innovation and Transformation." 2022. https://d3.harvard.edu/platform-digit/submission/mpharma-is-a-platform-model-always-successful/.

Zainudin, Arif, Akhmad Habibullah, Yuni Arfiani, and Sesya Dias Mumpuni. 2023. "Digital Transformation on Aquaculture in Indonesia through EFishery." In *IOP Conference Series: Earth and Environmental Science.* Vol. 1147. https://doi.org/10.1088/1755-1315/1147/1/012024.