

# **Platformisation dependency-interdependency dynamics in BRICS: from challenges to integration opportunities in a multipolar world<sup>1</sup>**

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## **Abstract**

In light of world-systems theory hierarchisation of the international system, this article aims to provide a systematic assessment on BRICS' platformisation dynamics on dependency-interdependency basis in relation to the capitalistic core in the multipolar world. As an inductive study, it first draws from international political economy and International Relations discussions establishing and elucidating as a premise that deglobalisation and multipolarity are both strategies deployed by United States led western collective and BRICS respectively. The first strategy deploys tactics such as sanctions, decoupling and shoring mechanisms while the second works with south-south coalition building, pursue of national growth and dedollarisation tactics. In the second empirical segment, it highlights the platformisation dynamics within BRICS concluding that China and Russia are mostly independent from the world-systems digital economy infrastructure core but Brazil, India and South Africa (BIS) are fully integrated and dependant on it. It concludes that although there are challenges and contradictions to BRICS integration on digital aspects, there are plenty of market opportunities as long as the bloc or parts of it (like the BIS) aim for higher cooperation in the platformisation space, a needed goal in the age of interdependency weaponisation.

**Key-words:** BRICS. Platformisation. Dependency. Digital Era. World-Systems Theory.

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## INTRODUCTION

Although statements such as “data is the new gold”<sup>3</sup> or claims that its value has surpassed that of oil in the world<sup>4</sup> may be overly exaggerated or fetishised, there is no denying that digital information is a new sort of commodity in the Digital Era that sprung from the 1970’s decade forward<sup>5</sup>. In its second period, accelerated from 2008 onwards, we have had the digital platformisation phenomena disseminated within globalisation in international political economy. Nowadays, however, what is being discussed and observed is a halt or regression, a movement towards deglobalisation in a new context of actual or transition to multipolarity.

Mainly a process driven by growing tensions from the United States in relation to China and Russia, deglobalisation has brought back or inserted a number of concepts in recent international political economy and International Relations debates. This paper under the premise that deglobalisation and multipolarity are strategies deployed by the U.S. led western collective and by the BRICS bloc, respectively. Each of these strategies has a set of tactics at its disposal: the deglobalisation strategy is composed by sanctions, decoupling and shoring mechanisms (reshoring, nearshoring, friendshoring). Meanwhile, the multipolarity strategy is composed by tactics of south-south coalition building, mainly represented by the BRICS alliance and its expansions, reliance on multilateralism, self-growth as well as by the dedollarisation tactics.

In light of international system organisation by world-systems theory, the objective of this paper is to then evaluate the dependency-interdependency dynamics between capitalism core (with the United States being the main actor) and the periphery/semi-periphery (represented by the BRICS) when it comes to the cyberspace territory. Through the platformisation tree by Djick (2020), we map this data and digital structural dependency dynamics and show how the BRICS bloc (the original five only, Brazil, Russia, India, China and South Africa) can be divided into two groups. China and Russia, in this order, being mostly independent of the U.S. international cyberspace platformisation ecosystem structure and Brazil, India and South Africa (BIS) being

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<sup>3</sup> Phrase originally by British mathematician Clive Humby in 2006.

<sup>4</sup> Editorial statement from The Economist (2007). Available at: <https://bit.ly/3PuF42Z>. Accessed in: 05/12/2023.

<sup>5</sup> For a historical assessment of the Digital Era, see Brancher & Polita (2023).

mostly intertwined and dependant on the core country's digital infrastructural. In that sense, being pools of data extraction to U.S. platforms and over-reliant on those systems.

As an inductive study, the article is divided into two sections (i) highlighting the discussions in international political economy when it comes to deglobalisation and multipolarity, by elucidating the study's premises, and by introducing the theoretical platformisation tree by Djick (2020), which will serve as the basis for the analysis. In the second section, through analysis by the platformisation tree analogy coupled with indicators of BRICS' cyberspace, we evaluate the level dependency-interdependency dynamics in each of the bloc's nations. This is done both by highlighting problems and challenges related to the world-systems core country's platforms but also by bringing into light challenges between BRICS platforms within the bloc, be it by looking at geopolitical tensions among China and India or institutional issues with specific platforms in relation to the law of the given countries.

## **INTERDEPENDENCE IN DEGLOBALISATION & MULTIPOLARITY**

This section introduces the recent political economy literature on interdependency in relation to deglobalisation (a strategy) and its mechanisms/tactics (the types of shoring, decoupling) as instrument of U.S. hegemony and the focus on material bases. Meanwhile, it evaluates BRICS as a bloc in a push towards multipolarity mainly through the dedollarisation mechanism to facilitate direct trade and avoid sanctions. Digital aspects in these economic discussions receive, however, less attention on these debates (aside from the digital sovereignty literature not discussed here). Both debates, on deglobalisation or multipolarity, in the political economy field are however intertwined by the concept interdependency and, mostly important, its weaponisation. The section then introduces the platformisation tree theoretical framework from Djick (2020) which will be used to both explain the importance of digital infrastructures and serve for the main analysis on BRICS digital tendency on the following section.

As Çevik (2024) describes, a "peace" period bought the world both economic interdependency as well as the globalisation phenomenon. For the scholar, the major events which pushed economics into a regression on both elements were, in chronological order, the 2008 financial crisis, US president Donal Trump's economic policies towards China, the COVID pandemic and, finally, the Russian-Ukraine War. Treating these events

as “shocks”, the author argues these dynamics pushed for a reorganisation of global supply chains into policymakers’ evaluation. With a focus on sanctions and war, Brancaccio & Califano (2023) also emphasise era of deglobalisation arguing, however, that the Russian-Ukraine War works not as a mere event, but as a “symbolic conclusion” of this process which involves two blocs of power, one led by the United States and another led by China. The authors evaluated that even if concepts such as “decoupling”, promoted by the U.S., are heavily discussed in the past few years, it is a process that already underway much earlier and that sanctions are a mean to accelerate it.

Both Çevik (2024) and Brancaccio & Califano (2023) also offer insights about mechanisms used in recent globalisation/deglocalisation debates. Çevik highlights the types of shoring from reshoring (nationalising back certain types of production), nearshoring (trying to bring these productions chains to states close by) and the most common one discussed, friendshoring (bringing these supply chains and productions to perceived allied nations). Brancaccio & Califano (2023) emphasise that “Western friendshoring can be seen as a defence against the risks of a Chinese-led centralization of capital, a strategy which has been applied since well before the term started to be openly used.” (2023, p. 13).

If discussion on deglobalisation and its tactics (decoupling, re-, near and friendshoring) are mostly a development of Western countries actions, multipolarity is here seen as strategy or goal by the BRICS bloc. As Schulze (2022) describes, albeit not new, this concept to understand the world order has seen a rebirth at the beginning of the 21<sup>st</sup> century in Russia, China as well as in Europe wherein it never left debates in the U.S. foreign/security discussions. After the fall of the URSS, the author argues Russian Prime Ministre Yevgeny Primakov had the concept in mind as a key pillar and sought to stablish and alliance between his country, China and India to counter-balance U.S. hegemony. That wasn’t possible, Schulze (2022) argues, because all actors involved were not strong politically and economically.

In Brazil most dominant political party post military dictatorship, the worker’s party (PT), in 1993, already laid the groundwork strategy that would foment the BRICS and multipolarity. As the documental work from Quero (2014, p. 21) highlights that party meeting resolution declared the South American country should pursue a multilateral attitude when it would rise to power together “India, Russia, China and eventually South Africa” in order to counter the U.S. hegemony and have a better position in the international system. The term BRIC would be invented only seven years later. As the

Quero (2014, p. 33) notes, on the first day of the first term of Lula's presidency, the petista vowed to "stimulate the incipient elements of multipolarity in the international system".

Decades later both PT and Primakov's efforts would bear fruit with the BRICS bloc and the stronger movements towards multipolarity. As Rapanyane (2020) evaluates this is both a result of internal and enteral conflicts in the United States, or the core of the world-system, as well as the emergence of BRICS by looking at elements like Foreign Direct Investment (FDI). He argues as well that "US hegemonic decline is centrally found in the BRICS countries having increased economic strength and leverage to communicate their desires and needs in the international arena". (2020, p. 1).

If deglobalisation is a strategy from Western centric countries and decoupling, the types of shoring of global chains as well as sanctions are their tactics, dedollarisation is the tactic employed by BRICS, alongside their own economic growth as an element, in their multipolarity strategy. Rapanyane (2020) already hints at dedollarisation as a counter-hegemonic mechanism, but Khan (2023) develops the argument further. By looking at BRICS, the author argues this process is being accelerated by the bloc, a move intensified after the U.S. lead collective starting deployed the instrument of sanctions during heightening of the Russo-Ukrainian conflict, arguing as well the BRICS+ expansion solidifies this tendency further.

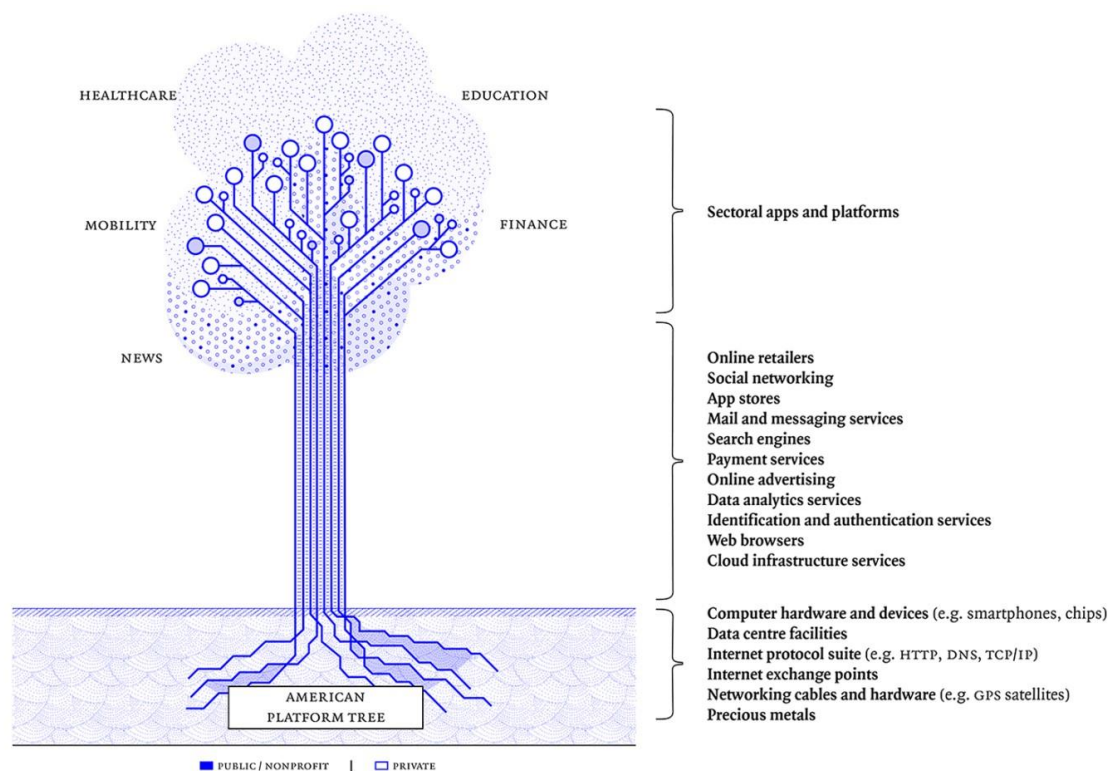
Be it for reasons of deglobalisation or multipolarity strategies, interdependency or dependency are both concepts that move these strategies forward. Be it for global chains productions dependency from Western in relation to China, be it the dependency BRICS having to resort to dollar as the common currency denominator for trade relations. In other words, this movements represent a turn on interdependence due to its to weaponisation. As Farrell and Newman (2019) point out the globalised world has made a weapon of war out of everything, this includes information, trade, global supply chains in which states deploy other confrontational tactics short of actual military force. More importantly to this article, the authors also state how the International Relations field has generally neglected digital aspects such as the internet when it comes to understanding globalisation and power. It is through these aspects that this article seeks to elucidate further when it comes the digital dependency and interdependency relations by looking at the BRICS countries in relation to the core of the world-systems.

To do so, we deploy José van Dick's (2020) conceptual platformisation tree to establish the whole parts of the digital infrastructural on cyberspace. Her visualization work has the aim to allow for a better understanding of platformisation governance. In

her aim, the objective is to elucidate the power dynamics in this this infrastructure through the abstractions of vertical integration, infrastructuralisation and cross-sectorisation in order to inform European actors to regulate and facilitate change. For Djick (2020, p. 2802) these international “information systems reigned by techno-corporate apparatuses now supersede the economic power of nations” and shifts the conversation from platforms as closed systems to platformisation as a phenomenon to understand it as structural.

As seen in Figure 1, the platformisation tree is based on the United States digital structure from bottom to top that allows for building of these power dynamics from cyberspace users’ data. In short, the tree encompasses a down-upwards analogy where the roots are physical material base (internet cables, data centres) to the transition to the trunk where we have platformisation enablers (from web browsers to operational systems and physical devices) that as we go up become increasingly software based that depend on the internet to function in the middle of the trunk (digital payment system, communication and social platforms, retail online shops, search engines) where we also find the mediators the author identifies as “super-platforms” and which govern the ecosystem and thus hold the power in cyberspace. Finally, we have the branches which have “sectoral applications” that function on the basis or connected to the digital platforms in the trunk.

**Figure 1 - Djick's Platformisation Tree**



Source: Djick (2020).

In the next section, we employ her tree of platformisation analysis but not seeing it not merely as a structure or with the focus on regulatory questions. We see the platformisation tree as a mechanism of dependency in the world-systems in which to be connected to this “American platform tree”, like in her figure, is to have nations dependent on it. Looking at specific parts of the tree in BRICS, we can identify the levels of dependency, interdependency or general autonomy of the bloc’s nations in their digital cyberspace at a more nuanced and clear segments.

### **BRICS: AN EMPIRICAL ASSESSMENT ON PLATAFORMISATION DEPENDENCY-INTERDEPEDENCY DYNAMICS**

In this section we highlight data around digital platforms in the BRICS countries (here’s focused on the original five, not the expanded organisation announced at Johannesburg’s XV BRICS Summit, in August 2023) and discuss their independency-dependency relations mainly through empirical evaluation in relation the platformisation tree theoretical model established by Djick (2020). The dynamics of dependency-interdependency as treated through a theoretical analogy of World-Systems Theory, thus between the capitalism core in relation to periphery/semi-periphery. In other words, between the United States platformisation structure and BRICS respectively. At the same time, we seek to highlight political contradictions by and in the in the bloc when it comes to digital platforms showing challenges and opportunities for the BRICS countries.

**Table 1 – Cyberspace population in BRICS countries**

|                             | <b>Brazil</b> | <b>Russia</b> | <b>India</b> | <b>China</b> | <b>S. Africa</b> |
|-----------------------------|---------------|---------------|--------------|--------------|------------------|
| <i>Population</i>           | 217.0 mi      | 144.2 mi      | 1.44 bi      | 1.43 bi      | 60.69 mi         |
| <i>Internet users</i>       | 187.9 mi      | 130.4 mi      | 751.50 mi    | 1.09 bi      | 45.34 mi         |
| <i>Connected population</i> | 86.6%         | 90.4%         | 52.4%        | 76.4%        | 74.7%            |
| <i>Online hours per day</i> | 09h13         | 08h21         | 06h45        | 5h33         | 09h24            |
| <i>Via mobile phones</i>    | 98.5%         | 95.1%         | 96.6%        | 95.8%        | 96.0%            |

Source: Own elaboration with data based on Kepios (2024a, 2024b, 2024c, 2024d, 2024e).

In Table 1, we see the number of internet users - the general BRICS cyberspace population per country. Through the number of internet citizens in relation to the population size of each country, we can see a clear divide between the most connected nations (Brazil and Russia), the mostly connected ones (China and South Africa) and India with a little more than half of her population with a cyberspace presence. It is also

of note to see the growth potential of sheer numbers that both China, and especially India, could add to their digital economy (roughly one and two “United States” worth of population respectively). If data extraction is the new gold, then these are the “available markets” when it comes to the digital realm in the bloc.

As per the platformisation tree conceptualised by Djick (2020), there are several types of platforms and platformisation enablers which both organise and structure the digital cyberspace and the platform monopolies ecosystems. By the proposition by Brancher & Polita (2023), there is, however, a divide in this cyberspace. Through their illustration, there are two main platform ecosystems that organise the digital realm: the hegemonic United States’ international cyberspace and China’s national insulated one, both permeated by a dominant neoliberal and projectment ideologies respectively. This is not to say, as the authors argue, there are not contractions to be found in both cyberspaces. In this section, we can highlight some of these contractions altogether with the interdependency-dependency digital platform dynamics on the BRICS bloc and the core of the world-systems.

**Table 2 - Internet browser market share by origin in BRICS**

|                             | <b>Brazil</b> | <b>Russia</b> | <b>India</b> | <b>China</b> | <b>S. Africa</b> |
|-----------------------------|---------------|---------------|--------------|--------------|------------------|
| <b>United States</b>        |               |               |              |              |                  |
| Alphabet's Chrome           | 75.0%         | 49.6%         | 87.1%        | 51.5%        | 72.5%            |
| Apple's Safari              | 08.6%         | 11.5%         | 02.5%        | 12.8%        | 11.5%            |
| Microsoft's Edge            | 04.7%         | 04.5%         | 01.5%        | 08.9%        | 01.9%            |
| Mozilla's Firefox           | 02.7%         | 03.4%         | 01.1%        | 01.7%        | 01.2%            |
| <b>BRICS</b>                |               |               |              |              |                  |
| UC Browser (China)          | -             | -             | 02.5%        | 07.5%        | 00.5%            |
| Yandex Browser (Russia)     | -             | 22.0%         | -            | -            | -                |
| 360 Safe Browser (China)    | -             | -             | -            | 07.3%        | -                |
| QQ Browser (China)          | -             | -             | -            | 07.0%        | -                |
| <b>Other's</b>              |               |               |              |              |                  |
| Opera (Norway)              | 05.0%         | 07.4%         | 04.1%        | -            | 03.8%            |
| Samsung Internet (S. Korea) | 02.1%         | 01.0%         | 00.9%        | -            | 08.5%            |
| Multiple (Other)            | 01.9%         | 00.7%         | 00.7%        | 03.4%        | 00.2%            |

Source: Own elaboration with data based on Kepios (2024a, 2024b, 2024c, 2024d, 2024e).

In Table 2, we see market share for web browsers in the population of BRICS countries. Internet browsers were once the window into the internet by allowing a



interface through each one could access websites and their information in a user-friendly manner. With the advent of Web 2.0 and its new standards, web browsers became a driver for platformisation given that the new technologies “extended the reach of websites, its functionalities and user-interaction possibilities” and thus ‘favored a “platformization” of the Web in a clear move towards interoperability between different components.’ (Tabarés, 2021, p. 2). For Djick (2020), in the platformisation tree, web browsers are part of the trunk of the tree in the digital infrastructure as “proprietary software components”. More precisely, they are located in the changeover from hard components of tree, the roots (the physical infrastructure that allows for all the connections), to the trunk where we can see a control struggles between the private and the political.

By looking at the origin of these internet browsers in Table 2, we see the dominance of Alphabet’s Chrome (Google) in all BRICS countries to the point that even China, which has an historically insulated cyberspace, has it as the dominant platformisation enabler, showing her dependency on it since it is the most used by her citizens. We can also see there are alternatives web browsers developed by BRICS countries, but the only one with a high degree of penetration is Yandex Browser in Russia, being the second most used in the nation. Except for India as well, in the other BRICS members the second most used web browser platform is Apple’s Safari, created as well in the core of the worlds-system. As we go up in the platformisation tree, however, we can see a growing independency by a couple BRICS countries from this core.

In Table 3, we see the market share of search engines divided by their origin nation in BRICS countries. If prior to their platformisation internet browsers were initially a user-friendly interface for the common cyberspace citizen to explore the world wide web, search engines were their hosts, introducing and filtering the content according to the user’s interests and inputs. At first, the web had a more static nature, with black boxes blocs that didn’t allow for search engines to “crawl the information hosted in these elements for developing services that [could] be monetised”. As new protocols and platformisation developed, the internet became more dynamic according to private players’ interests and allowing for “the technological basis for digital business models based on data” which made possible for “digital platforms such as Google [to position] themselves as providers of several digital services (...) exerting a considerable dominant position on the Internet industry”. (Tabarés, 2021, p. 3, 6). Search engines are located in the trunk of the platformisation tree digital conceptualised by Djick (2021, p. 2806)

constituting “the core of platform power, as they mediate between infrastructures and individual users, as well as between infrastructures and societal sectors”.

**Table 3 - Search engines market share by origin in BRICS**

|                      | <b>Brazil</b> | <b>Russia</b> | <b>India</b> | <b>China</b> | <b>S. Africa</b> |
|----------------------|---------------|---------------|--------------|--------------|------------------|
| <b>United States</b> |               |               |              |              |                  |
| Google (Alphabet)    | 95.30%        | 28.10%        | 98.20%       | 02.30%       | 95.80%           |
| Bing (Microsoft)     | 03.30%        | 01.40%        | 01.10%       | 13.40%       | 03.50%           |
| Yahoo! (Verizon)     | 01.10%        | 00.30%        | 00.40%       | -            | 00.20%           |
| DuckDuckGo           | 00.10%        | 00.10%        | 00.20%       | -            | 00.10%           |
| <b>BRICS</b>         |               |               |              |              |                  |
| Yandex (Russia)      | 00.10%        | 69.80%        | 00.02%       | 02.70%       | 00.04%           |
| Baidu (China)        | 00.07%        | 00.20%        | 00.03%       | 66.03%       | 00.02%           |
| Haosou (China)       | -             | -             | -            | 06.50%       | -                |
| Sogou (China)        | -             | -             | -            | 05.10%       | -                |
| Shenma (China)       | -             | -             | -            | 02.60%       | -                |
| <b>Other's</b>       |               |               |              |              |                  |
| Ecosia (Germany)     | 00.02%        | -             | 00.01%       | -            | 00.02%           |
| Multiple (Other)     | 00.01%        | 00.10%        | 00.01%       | 01.10%       | 00.30%           |

Source: Own elaboration with data based on Kepios (2024a, 2024b, 2024c, 2024d, 2024e).

As we can see in Table 3, Russia and China are the only BRICS countries with a lesser dependency on the Google search engine platform, with each their own national solution - through Yandex and Baidu respectively - as the dominant cyberspace search platform in these nations, albeit with some level of penetration by United States based companies. The latter Google solution is, however, the dominant player in Brazil, India and South Africa (BIS) countries with a monopoly with no less than 95% of the market share and control over these information flows as well as data collection for monetisation. The residual presence of other platforms in BIS is also captured by the world-systems capitalism core with no presence of BRICS solutions nor any own solution based on the BIS countries detected at all by the database survey.

Besides the question of the digital economy, this monopoly has generated several issues of legal nature not only in the periphery/semi-periphery and even at the core (depending how one defines Europe’s position in this typology). In a discussion with Surveillance Capitalism author Shoshana Zuboff, German businessman Mathias Döpfner (2019) discusses the case of Google within the context of his country copyright law.

Google responded by basically erasing the presence of German creators resulting in search traffic fall of the businessman company by 85%. The same happen with a new France legislation, which was also answered by Google with delisting tactics and made French publishers to back down. Per Döpfner (2019): “This clearly highlights our total dependence on Google, and Google's abuse of that. And what it also clearly shows is that Google is effectively able to overrule the rule of law, and with that the power of the market, in a country”.

In a more direct approach to political aspects, in Brazil, the Executive Branch had to intervene against Google’s abusive practice when the country’s Congress south to create new disinformation laws. The search engine monopoly used its main home page and advertising arm to push public opinion against the Congress and Govern’s law project that would go in opposite direction of their interest. The company put in its search engine main page the message alerting users that the “Fake News LP [Law Project] can raise the confusion about what is true or lie in Brazil”. Brazil’s Justice Minister, through its accountability consumer agency, moved to stop the practice declaring the government found dozens of manipulation indications and that “what we are avoiding [with the process against Google] is non declared, private and clandestine censorship”. (Amato et al, 2023).

The company was later ordered to remove their adverting campaign against the law project with a fee and for the abuse of its market position to sway public opinion and did it so as ordered (Brasil, 2023a). At least in this case, in the opposite direction of the former discussed European example, the Brazilian authorities did not need to “back down” in relation to the United States platform. Given the monopoly that company has in this segment one can see authorities saw the danger of this practice that in this case was fought back because using their main page made the practice too explicit.





When it comes to those digital platforms that are mostly recognised for being so, we can see their dominance BRICS countries and where they are originated in Table 4. As we go up in the tree by Djick (2020), we see a growing level of independence by Russia and China a more diverse penetration of platforms by and within BRICS especially in the BIS countries, although in these the domination/dependency by the core’s companies continue. In this segment, however, we see the complete insulation of China’s cyberspace argued by Brancher & Polita (2023) due to the full of her ecosystem dominated by national platforms solutions. In the International United States Cyberspace this segment is important because they are dominated by the core’s platforms and “there

is hardly any nonmarket or state presence and (2) these super-platforms are highly interdependent, governing the platform ecosystem through competition and coordination” (Djick, 2020, p. 2807) and thus also creating dependency with data extraction from the periphery/semi-periphery and most of the BRICS here analysed.

**Table 4 - Digital platforms cyberspace market penetration by origin in BRICS**

| Brazil      | %   | Russia        | %   | India       | %   | China       | %   | S. Africa   | %   |
|-------------|-----|---------------|-----|-------------|-----|-------------|-----|-------------|-----|
| WhatsApp    | 93% | WhatsApp      | 74% | WhatsApp    | 83% | Weixin      | 87% | WhatsApp    | 93% |
| Instagram   | 91% | Telegram      | 72% | Instagram   | 80% | Douyin      | 78% | Facebook    | 88% |
| Facebook    | 83% | VK            | 71% | Facebook    | 71% | QQ          | 59% | TikTok      | 73% |
| TikTok      | 65% | TikTok        | 41% | Telegram    | 58% | Tieba       | 58% | Instagram   | 71% |
| Messenger   | 60% | Odnoklassniki | 40% | Snapchat    | 48% | Xiaohongshu | 51% | Messenger   | 67% |
| Telegram    | 56% | Viber         | 30% | Messenger   | 45% | Kuaishou    | 47% | X (Twitter) | 55% |
| Pinterest   | 46% | Instagram     | 22% | X (Twitter) | 41% | Weibo       | 46% | LinkedIn    | 52% |
| Kuaishou    | 46% | Pinterest     | 14% | LinkedIn    | 34% | Qzone       | 28% | Pinterest   | 46% |
| X (Twitter) | 44% | Skype         | 10% | Pinterest   | 28% | Huoshan     | 18% | Telegram    | 43% |
| LinkedIn    | 37% | Discord       | 7%  | Sharechat   | 21% | Meipai      | 16% | Snapchat    | 31% |

|   |    |   |    |
|---|----|---|----|
|  | US |  | RU |
|  | CN |  | IN |

Source: Own elaboration with data based on Kepios (2024a, 2024b, 2024c, 2024d, 2024e).

Yet as seen in Table 4, in Russia we can see WhatsApp (Meta) is the most used platform but it's the only U.S. national with a penetration above 22% of the nation internet citizens and it has a direct competition (Telegram<sup>6</sup>) as a close second place, it being a viable and highly used alternative. The remaining dominant platforms are home based, being alternatives to U.S. platforms in other regions, such as VK and Odnoklassniki (Russian “Facebook”). We can also see the presence of China's TikTok while the rest of the digital platforms do not possess a high usage/penetration in the country. The BRICS country, in this segment, is not as autonomous as China, but one can say it has grown generally independent from the core of the worlds-system.

Russia may be the greatest example of a country which was initially forcefully decoupled from the centre of the world-systems economy. This can be said in relation to

<sup>6</sup> It is important to note that even though we consider Telegram as a Russian platform (it was created by VK's original designers and it is more often than not associated with Russia), the digital platform seeks to say they are independent, following political controversies with their creators and the Russian government. Currently the application is based in the United Arab Emirates (now part of BRICS+) and, as they state on their page, most of its developers are from Russian Saint Petersburg. See <https://tinyurl.com/53x83v36>. Accessed in 08/02/2024.

the digital realm here analysed well, an outcome pursued after suffering heavy sanctions from the “collective West” which triggered a harder push towards multipolarity (with increased trade with BRICS and the Global South in general). After being shut down from SWIFT (a digital platform)<sup>7</sup>, the country digital independency from United States’ or the core and semi periphery (Europe) of the worlds-system became a necessity and a policy goal. In 2014, digital payments platforms such as Visa and Mastercard already had issues working in Russia due to initial sanctions which opened space for Chinese competitor UnionPay<sup>8</sup>. The replacement work started at the time helped alleviate the sanctions intensifying when the Western platforms fully abandoned the nation’s market in the context of Russia’s so called “special military operation (SMO)” in Ukraine, in 2022. In that way, the core forced de-platformisation tactics against Russia and the country since then in the segment helped to pave the way to the development of national solutions to a national payment system such as Mir (Pertseva, 2023).

Per Table 4, India has the less diverse platform cyberspace close to fully dependent on U.S. based companies although the nation has a national platform between the ten most used ones as well as Telegram penetrating close to 60% of its digital population. The country is an interest case because her relations with China also has spillovers on the digital realm. A fact elucidated by her TikTok ban alongside WeChat and other popular Chinese platform applications – 59 in total - (BBC, 2020) stressing contradiction within BRICS and integration challenges.

It is also important to contrast that even though there is this dependency on U.S. digital infrastructural ecosystem, only 52% of the India is connected to the internet as seen Table 1. In an individual level, an important number due to a great number of potential internet citizens not having developed digital habits with specific platforms, which can reinforce themselves in a cycle, while, in a collective or market-oriented level, the literature on this segment emphasis the success of winner-take-all strategies as platformisation network effect (Cennamo; Santaló, 2013; Bayer et al, 2022).

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<sup>7</sup> The Society for Worldwide Interbank Financial Telecommunication (SWIFT) is often portrayed simply as an international banking system, but in its current functionality we can argue proper term would be to label it as a digital platform. Once a mere messaging system, “SWIFT has been driven to platformize, centralizing financial transaction management and big data analysis, to retain but also optimize CB [correspondent banking]”. (Robinson et al, 2022, p. 489).

<sup>8</sup> When it comes to these payment platforms, sanctions hit Russia’s banks as soon as the crisis started in 2014, after the country annexed Crimea. Already at the time, UnionPay became an alternative as replacements to Visa, Mastercard, American Express and other Western options. As a national businessman declared, UnionPay “will be more reliable than Visa. At least the Americans won’t be able to grab it.” (Venkataramakrishnan et al, 2022).

These factors contribute not only to explain India's position on TikTok, but the United States' strategy in relation to this Chinese platform as well. As Pecequillo & Junior (2022) note, platform companies control the digital infrastructure monitoring the competition to then, for example, buy them in order to eliminate market adversaries. Not being a private party, instead of simply banning TikTok directly and opposite to India's initiative, the United States legislators in 2024 passed a bill offering ByteDance the option to sell the platform to a non-Chinese party and, only if they refuse to sell it, TikTok would be ban nationally<sup>9</sup>. This strategy by the U.S. government highlights that even though they wish to ban the Chinese platform from their cyberspace (be it for the official reason of national security, be it for economic reasons due to lobbying from national platforms), they would prefer to absorb it, recognising its value and the disruption a ban could ensue due to its high market penetration on that digital territory. This is also noticeable despite TikTok not being a digital platform on the same level as those of Meta or Alphabet which constitute an ecosystem of platforms on their own with multiple functionalities and extensive network gains<sup>10</sup>.

Opposite to India (Table 1), Brazil has a high percentage of her total population as internet citizens - with 86% of the population online of which 98% are connected as well through mobile devices, where data information collection by digital platforms thrive. As India, however, Brazil is another case of heavy dependency on the U.S. platform ecosystem (Table 4). WhatsApp (Meta) being so prominently and inherent to Brazil's digital economy could even entail GDP repercussions in the case of problems with the platform. To illustrate the point, we can point to a survey and econometric study by Rafert & Mate (2017) which shows the digital platform, in terms of consuming spending, already could represent up to 0.88% on GDP, in a very concrete expression of the digital infrastructure concept. The figure impresses even more so when known the researchers worked on data based on 2015, when WhatsApp had barely 49% penetration on Brazil's cyberspace (their numbers), not 2024's 93% penetration rate shown in Table 4.

That said, the South American country has a high penetration of BRICS digital platforms such as TikTok, to a lesser degree, of its Chinese competitor Kwai (Kuaishou). Besides that, Telegram (Russia), as a WhatsApp (Meta) alternative, has been accessed by

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<sup>9</sup> This bill has still not fully approved it as of this writing however (CNN, 2024).

<sup>10</sup> Or, as Brancher & Polita (2023, p. 39, our translation) analyse: "Google and Facebook qualify themselves and have penetration in scale superior to platforms with a more limited focus on entertainment, as Snapchat or TikTok. This also happens because the former ones are current digital infrastructures, unlike the latter ones."

a little over half of Brazil's digital population. Looking at the whole BRICS in Table 4, Brazil can be argued as a middle country in the sense of having more presence from digital platforms originated from the bloc, and in that way less dependency from U.S. ones, in relation to India and South Africa (although not by much), but far from a more national platform system like with China or even Russia.

The South American country exposes other challenges when it comes to BRICS' digital platforms and integration. The same way the country had issues with Google/Alphabet, it had with Telegram with the only difference Telegram is not ubiquitous nor has a monopoly over the segment like the former company. Brazil's Supreme Court acted against the Russian originated company for its actions against the fake news law project (PL 2630/2020) as well but also in other stances during the election cycle, when the platform refused to delete content, with moments when the company was even blocked from the nation's cyberspace (Brasil, 2022; 2023b). As the whole BIS countries, South Africa is also very much intertwined in the U.S. digital platform ecosystem per Table 4. Like Brazil, the nation does not have a single national platform with any prominence in its cyberspace although it does have the presence of two BRICS platforms with Telegram and TikTok.

It is also of notice the high penetration of WhatsApp as a platform in all BRICS, except for China. Meta's platform enjoys not only being the one with the higher penetration in the bloc, but it does so in the essential telecommunication sector. Meta also enjoys the fact of having multiple platforms of its ecosystem with high penetration in the BIS countries, with Facebook being the second platform in Brazil and India as well as the third one in South Africa. Instagram and Messenger, also Meta platforms, also with high presences and contributing to the value of the megacorporation and expressing their monopoly in this sector. This also highlights the qualitative differences between platforms such as TikTok (an entertainment platform which stands on its own) with platforms that compose their own corporate ecosystem like Meta (Communication, business, and social platforms in unison - Facebook, WhatsApp, Messenger, Instagram) that are more able to extract data and directional publicity as a monopoly in international scale encapsulating most BRICS countries.

When we look at the overall picture in evaluated in this section, we can see that even China as the most independent of the original five BRICS still has partially dependence on the core of the digital world-systems. On the basis of the platformisation tree, we can see China's dependency on the trunk of the digital infrastructure (web

browsers). Going up on the trunk, we see mostly independent cyberspace from the core with national platforms when it comes to search engines and, going up further, a fully independent system of digital “super-platforms” as per Djick (2020) which govern the ecosystem.

Russia differs from the other four BRICS in having a national web browser platform decently well used in the country, but as is the case in all BRICS there is an overreliance on the core’s main option. Going up on the conceptual trunk, the independence grows to look more like China in the search engine segment. It is only in higher on the trunk, when it comes to the “super-platforms” that govern the cyberspace that the country has a mix between core’s platforms and national equivalents wherein China has a full national super-platform system.

It is only when it comes to the BIS countries that we see the case of dependency more evident. All these BRICS countries are basically in a fully dependant dynamic with the capitalist core of the world-systems in all parts of the ecosystem. Looking at the three nations, core’s web browsers dominate the BIS cyberspace as well as Google have a monopoly when it comes to search engines in this country with the minimum digital market share of 95% in the three. When it comes to the “super-platforms” the core’s dominance is also evident, although there is presence of other BRICS platforms from Russia and China in Brazil and South Africa and Russia in India.

Change towards BRICS integration or growing interdependency between integration would be welcomed in the sense of having a more options and equilibrium in relation to the core’s international cyberspace. Besides users’ habit changes barrier there are questions of geopolitics, like between India and China, and behaviour of platforms towards institutions that may act even like the core’s platforms (as in the Telegram case vis-à-vis Google and Meta issues in Brazil). The geopolitical changes towards multipolarity however may push and offer greater opportunities for higher integration or cooperation between BRICS in the digital realm to break away from the digital dependency relation, mainly of the BIS countries, from the core of the world-systems.

## **CONCLUSION: CHALLENGES AND OPPORTUNIES FOR BRICS**

This article aimed to evaluate the digital infrastructural dependency-interdependency of BRICS countries in light of the world-systems theory international



hierarchy organisation, with core of the system being the United States' platformisation digital structure. In order to evaluate these dynamics internally in BRICS, we resorted to the platformisation tree analogy by Djick (2020) which allows for a throughout analysis of each part of the system that monopolises data extraction in the international system. In the first section, we sought to give basis to the article's premisses organising the concepts of the current themes of international political economy.

We showed how deglobalisation and multipolarity are both strategies with an arsenal of tactics at their disposal. The first is a strategy deployed by Western states led by United States with tactics such as sanctions, decoupling and the variations of shoring of production and supply chains (reshoring, nearshoring, friend- or ally-shoring). The second strategy has been historically articulated by the BRICS bloc and - besides elements such as the goal of increase their economies - it relies on tactics of alliance formation (the block itself) and its expansion with the main tactic being the pursue of dedollarisation.

In the second section, we highlighted the segments on the trunk of the platformisation tree where we could verify specific BRICS' potential sectorial digital structural dependencies. We could see how the bloc is still mostly dependent on the core of the world-system web browsers solutions, for example, but that the level of dependency felt dramatically in China and Russia as we go up in the structural analogy by looking at important cyberspace dimensions such as search engines and, finally, in the super-platforms domain. The BIS countries (Brazil, India and Africa) however are practically fully dependant on the United States' international cyberspace ecosystem on both of these tree sectors. If multipolarity creates increasing tensions, as realist international relations scholars often argue, these countries have challenges ahead in case of the weaponisation of their digital dependency by the core of the world-systems.

Additional problems with platforms originated with BRICS, as the case of Telegram and TikTok, also offer challenges and contractions to BRICS integration. That said, the number of internet citizens on the bloc offers tremendous opportunities in the case of higher cooperation note is achieved. A neutral framework and platform building between the BIS countries could help towards at least a more diverse cyberspace scenario, and in this sense, less dependent on the core's ecosystem. If these countries are seeking with the Global South to contribute to alternatives for SWIFT, for example, other types of digital platforms for integration or less dependency in the multipolar world are certainly achievable.

For future research within this agenda, studies encompassing all the BRICS+ members are encouraged. Research on the adaptations of the Russian economy and platform governance in light of the country's forcefully being deplatformed from the United States' International Cyberspace can also be of good use in case the same tactics are deployed against other BRICS members in light of interdependence weaponisation.

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