S. Beimenbetov [iD]

Kazakh-German University, Kazakhstan, Almaty
e-mail: beimenbetov@dku.kz

MAPPING INTERNET AND SOCIAL MEDIA USE IN CENTRAL ASIA

This article examines, updates and maps the use of the internet and social media in three Central Asian countries, using Kazakhstan, Kyrgyzstan and Uzbekistan as case studies. The aim is to generate systematic insights into the differences and similarities between the countries in the region in terms of the use and penetration of these media. The article highlights the uneven development of both media in the three countries and argues that the differences are related to the different socio-economic development and legal constraints in each country, with Kazakhstan leading the region in terms of internet and social media penetration and use, thus reversing the trend of the past when Kyrgyzstan was considered the most developed. The article concludes by stating that the internet and social media will continue to be important tools for communication and civic activism in the region, despite access and censorship problems, which, unlike in the past, have taken similar negative developments in the three countries in recent years. The study is based on secondary research.

Key words: Internet, social media, mapping, Kazakhstan, Kyrgyzstan, Uzbekistan.

С. Бейменбетов

Қазақстан-Неміс университеті, Қазақстан, Алматы қ.
*e-mail: beimenbetov@dku.kz

Орталық Азияда интернет пен әлеуметтік желілерді пайдалануды картаға түсіру

Бұл мақалада Қазақстан, Қырғызстан және Өзбекстан мысалында Орталық Азия өңірінің үш елінде интернет пен әлеуметтік желілерді пайдалануды талдау, өзектендіру және картаға түсіру жүргізіледі. Мақаланың мақсаты – қазіргі уақытта осы медианы пайдалану мен ену деңгейіндегі аймақ елдері арасындағы айырмашылықтар мен ұқсастықтар туралы жүйелі түсінік алу. Мақалада үш елдегі екі медианың да біркелкі дамымауы мен қолданылуына баса назар аударылады және бұл айырмашылықтар үш ел арасындағы әлеуметтік-экономикалық дамудағы айырмашылықтармен, сондай-ақ әр елдегі қолданыстағы құқықтық шектеулермен байланысты пікір айтылады. Бұл ретте Қазақстан басқа елдермен салыстырғанда Интернет пен әлеуметтік желілердің ену және пайдалану деңгейі бойынша өңірде көш бастап тұр, сол арқылы Қырғызстан осы тұрғыда өңірде неғұрлым дамыған болып саналған өткен үрдісті өзгертеді. Мақаланың қорытын бойынша, Интернет пен әлеуметтік желілер соңғы жылдары барлық үш елде де осындай жағымсыз даму тенденциясын қабылдаған қол жетімділік пен цензура мәселелеріне қарамастан, аймақтағы байланыс пен азаматтық белсенділіктің маңызды құралы болып қала береді және одан әрі жалғасады. Зерттеу қайталама зерттеу материалдарына негізделген.

Түйін сөздер: Интернет, әлеуметтік желілер, картаға түсіру, Қазақстан, Қырғызстан, Өзбекстан.

С. Бейменбетов

Казахстанско-Немецкий университет, Казахстан, г. Алматы
e-mail: beimenbetov@dku.kz

Картирование использования интернета и социальных сетей в Центральной Азии

В данной статье проводится анализ, актуализация и картирование использования Интернета и социальных сетей в трех странах Центральной Азии на примере Казахстана, Кыргызстана и Узбекистана. Целью статьи является получение систематического представления о различиях и сходствах между странами региона в использовании и уровне проникновения этих медиа в настоящее время. В статье подчеркивается неравномерное развитие обоих медиа в трех странах и высказывается мнение, что эти различия связаны с различиями в социально-экономическом развитии между тремя странами, а также существующими правовыми ограничениями в каждой

стране. При этом Казахстан по сравнению с другими странами лидирует в регионе по уровню проникновения и использования Интернета и социальных сетей, тем самым меняя тенденцию в прошлом, когда Кыргызстан считался наиболее развитым в регионе в этом отношении. В заключение статьи делается вывод о том, что Интернет и социальные сети будут и в дальнейшем оставаться важными инструментами коммуникации и гражданского активизма в регионе, несмотря на проблемы с доступом и цензурой, которые в отличие от прошлого в последние годы приняли похожую негативную тенденцию развития во всех трех странах. Исследование основано на материалах вторичных исследований.

Ключевые слова: Интернет, социальные сети, картирование, Казахстан, Кыргызстан, Узбекистан.

Introduction

Since independence, all Central Asian states have been integrated into the global information space and modern telecommunications systems. It is believed that in some parameters of the development of the telecommunication sector the countries of Central Asia have even been holding a leading position in the world (Karimova, 2021). However, the uneven political and economic development of the countries, as well as the differences in their regulatory frameworks, have affected the penetration and overall development of the internet in the countries. This study briefly examines and maps internet and social media use in Central Asia, focusing on Kazakhstan, Kyrgyzstan and Uzbekistan as case-studies. There is a growing body of literature that examines the use of the internet and social media in these countries and its political implications. While the political impact of the internet and social media is an important methodological approach, the purpose of this article is more modest and aims to examine the geographical spread and use of internet and social media in the region. The aim is to generate systematic insights into the current differences and similarities between countries in the region in the usage and penetration rate of these media. The study is based on secondary research. The main sources of information were statistics from national and international agencies, newspaper reports and reports in online media. The study is structured as follows. The next chapter examines the scholarly literature, followed by an analysis and mapping of internet penetration in the three countries. The third chapter provides a systematic assessment of social media use across the region. The penultimate chapter is devoted to a discussion of the legal framework in the countries studied. The last chapter summarises the results and briefly outlines the avenues for future studies.

Literature review

Over the last decades there have been some outstanding works examining the entry of the internet in the region, especially from a political science perspective. Hence more attention has been paid to the ability of the internet and social media to stir protests in the region, or to legal policies regarding the use of these media or state infringements on media freedoms. Thereby scholars converge in the point that the countries of Central Asia are different in terms of the extent to which the internet and social media are used in the region, which they attribute to differences in socioeconomic development and differences in the legal environment in place. From earlier studies, for example, Eric McGlinchey and Erica Johnson provide a compelling account of regulatory frameworks for internet in Central Asia, arguing that differences in policies concerning internet are due to who funds the development of ICT infrastructure. In particular, they note that where international aid agencies and NGOs provide capital and support local infrastructure development, as is the case in Kyrgyzstan and to a lesser extent Uzbekistan, the formal legal frameworks are open and permissive, whereas in countries where ICT development is supported by national governments, as in Kazakhstan, the formal frameworks are vague and open to manipulation (McGlinchey & Johnson, 2007). Differences in access to the Internet, or the "digital divide" as the term is used, have been specifically addressed by Barney Warf (Warf, 2013). In particular, he relates the cause also to the differences in socio-economic development and government policies. However, he finds some improvements in terms of the digital divide as governments – in part under pressure from international community – initiated steps to rectify the divide and as result "Central Asian digital divide is changing largely despite the region's governments, not because of them" (Warf, 2013: 282; also Walton et al., 2012). Brian Bowe et

al. in turn doubt the ability of the internet and social media to stir dissent in the region as they believe the governments crack on independent media, jail journalists and bloggers, and keep tight control over electronic media (Brian et al., 2012; also Matveeva, 2013). By contrast, the more recent accounts note some improvements in terms of internet access across the region and in terms of the 'de-politicisation' of the internet promoted by governments, which aims to curb online dissent by using internet to promote either apolitical content or governments' favoured agendas (e.g. Reyaz, 2020). Differences in policies and how they shape the media environments across countries of Central Asia have been further explored at length in a special issue edited by Peter Rollberg and Marlene Laruelle (Rollberg & Laruelle, 2015). Among the authors of this issue, Barbara and Azamat Junisbai, for example, examine the relationship between media environments and trust in electronic media and come to the surprising conclusion that despite lax media environment people in Kyrgyzstan have less trust in these media than in Kazakhstan, which is characterized by a strict media environment. Furthermore, they find that people use television as their primary source of information, while the internet is used least as a source of information (Junisbai & Junisbai, 2015). In another contribution, Luca Anceschi corroborates earlier findings that authorities in Kazakhstan seek to reduce the flow of political and critical information on internet while simultaneously shifting popular online consumption habits in nonpolitical directions (Anceschi, 2015). Apart from scholarly works, a number of policy-oriented studies have been written more recently examining the internet and social media use in the region. For example, Sharipova Dina and Beimenbetov Serik, in their study commissioned by Friedrich Ebert Foundation, explored among others the question as how internet is used as source of political information and in how much it contributes to transformation of societal values in the region and found out that internet has contributed significantly to the formation of critical mindset in the region, particularly so among the youth. Additionally, they found out that internet has finally overtaken the television as the primary source of information (Sharipova & Beimenbetov, 2021). Another recent compelling account on the use of internet was provided by Michele Häftlinger who traces the infringement of the state upon the internet and social media in Kazakhstan and Kyrgyzstan (Häftlinger, 2023).

Overall, much has been written about the use of the internet and social media in the region. However, many of the studies are dated or not comprehensive enough. To fill this gap, in what follows we will provide an updated snapshot of internet and social media use in the region.

Results and discussion

Use of the Internet in Central Asia
In this and next sections we sketch the development of the Internet and social media in the three countries studied, beginning with the Internet. As it will be shown, the internet has had a significant impact on Central Asia in recent years. Although there are still some problems with connectivity and access, especially in remote areas, the internet has become an increasingly important tool for communication, information sharing and economic development.

Kazakhstan
Among the Central Asian states, Kazakhstan appears to be the most advanced in the development of the Internet and ICT, although this was not the case in the past when Kyrgyzstan was leading the cause (Reyaz, 2020). Thanks to its economic advantage and massive investments made in recent years, the country has managed to bring the country in the lead within the region. In particular, the country has made great progress in connecting even remote, rural areas to the broadband network and did it relatively quickly. Historically, the internet came to the country in 1996, when Arna-Sprint Data Communications JV (ASTEL) started providing a full package of Internet services (WWW, FTP, e-mail, etc.) all over the country (Shipulin, 2021). Two years later, Kazakhstan Online, Kazakhstan's first data network consisting of the three main operators ASTEL, NURSAT and BankNet, was launched using ADSL technology. Over time, the network was extended to neighboring Kyrgyzstan and Uzbekistan (Shipulin, 2021).

To date, Kazakhstan continues to lead the region in terms of Internet penetration, with nearly 91% of the population, or 17.29 million people, using the Internet (World Bank, 2022). Within the region, Kazakhstan also offers the cheapest internet at 10.8 USD per month, making it affordable for the majority of the population. Affordability here refers to the cost of the average monthly broadband deal as a percentage of median household salary. According to the *'Internet Accessibility Index'*, which displays the ratio of the price and quality of the Internet, Kazakhstan ranked 55th out of 164 countries (Internet Accessibility Index, 2022), thus even ahead of some European countries such Portugal, Czech Republic,

and Greece, and occupying the middle ground in terms of quality and affordability of the internet in the world. In terms of broadband connection speed, the country ranked 95th in the world at the beginning of 2022 with 45.24 Mbps (Speedtest Kazakhstan, 2023).

In terms of mobile penetration, Kazakhstan ranks second. According to *Digital 2022 Report*, Kazakhstan had 24.42 million cellular mobile con-nections per 19 million population at the start of 2022 (Digital Report Kazakhstan, 2022). Given that many people around the world make use of more than one mobile connection and use several SIM cards, the mobile connection figures usually signifi-cantly exceed figures for total population. There-fore, the above figure is equivalent to 127.9 percent of the total population as of January 2022. The table 1 below sums up the figures for Kazakhstan.

Table 1 – Country Information: Kazakhstan

Country	Internet penetra-tion rate (%)	Internet down-load speed, Mbit/s	Mobile penetration (%)	Cost of broad-band per month (USD)	Affordability (%)	Rank
Kazakhstan	91	45.24	127.9	10.8	1.5	55

Source: Own construction

Kyrgyzstan

Within a regional context, Kyrgyzstan finds itself among the poorest of the post-Soviet states, along with Tajikistan. Despite low economic de-velopment, Kyrgyzstan is second most advanced among Central Asian countries when it comes to the development of Internet and ICT (Matveeva, 2013). Moreover, while other Central Asian governments have blocked critical websites almost since the In-ternet became available, Kyrgyzstan only recently began this practice after Sadyr Japarov took office as president (see below).

In terms of internet penetration, the country was ranked 78th in 2021 and thus ranks the second in the region (World Bank, 2022). According to *Digital Report 2022*, there were 3.41 million internet us-ers in Kyrgyzstan in January 2022 out of population of 6.7 million people (Digital Report Kyrgyzstan, 2022). In terms of fixed broadband Internet speed the country ranked 86th in the world with 51.43 Mbit/s and is thus first in the region (Speedtest Kyr-gyzstan, 2022).

According to Karimova's study, Kyrgyzstan also ranks first in the region in terms of cellular penetration (Karimova, 2021). In fact, 10.23 mil-lion SIM cards are registered for 6.58 million peo-ple, which is equivalent to 155.6%. In other words, half of the country's population has more than one SIM card.

However, with a monthly price of USD 19.9, or 9.5% of average household income (Internet Acces-sibility Index, 2022), Internet services remain ex-pensive for the majority of the population. Indeed, the country is ranked 116th out of 164 countries in terms of Internet affordability. The table 2 below sums up the figures for Kyrgyzstan.

Table 2 – Country Information: Kyrgyzstan

Country	Internet penetra-tion rate (%)	Internet download speed (Mbit/s)	Mobile penetra-tion (%)	Cost of broad-band per month (USD)	Affordability (%)	Rank
Kyrgyzstan	78	51.43	155.6	19.9	9.5	116

Source: Own construction

Uzbekistan

The second largest economy in the region, Uz-bekistan ranks third in Central Asia in terms of Inter-net penetration, which was 77% in 2021, according to the World Bank (World Bank, 2022). According to *Digital Report 2022*, there were around 26.18

million internet users in the country in 2021 (Digital Report Uzbekistan, 2022). However, in terms of the prices for fixed broadband connection they are much higher than in Kazakhstan and Kyrgyzstan and currently stand at 18.3 USD per month. As stated by some observers, when measured in terms of GDP, stable Internet access in Uzbekistan remains a rather "expensive pleasure for the majority of the population" (Karimova, 2021). Indeed, according to the *Internet Accessibility Index*, Uzbekistan occupied 113th place out of 164 countries in terms of the price and availability of the Internet in 2022, which means that the country has an expensive and slow Internet (Internet Accessibility Index, 2022). In terms of the fixed connection speed, with 36.23 Mbit/s Uzbekistan has ranked 88th in the world and third in the region (Speedtest Uzbekistan, 2023). In contrast to its high ranking in broadband penetration, the country ranks last in the region for mobile penetration. Data from *Digital Report 2022* shows that there were 29.59 million cellular mobile connections in Uzbekistan at the start of 2022, or 86.6 percent of the total population, which currently stands at 34.16 million (Digital Report Uzbekistan, 2022). The table 3 below sums up the figures.

Table 3 – Country Information: Uzbekistan

Country	Internet penetration rate (%)	Internet download speed (Mbit/s)	Mobile penetration (%)	Cost of broadband per month (USD)	Affordability (%)	Rank
Uzbekistan	77	36.23	86.6	18.3	7.7	113

Source: Own construction

Use of Social Media in Central Asia

Like elsewhere, social media has become an important platform for personal communication, market advertisements, political participation, civic activism, and much more in the region (Rollberg & Laruelle, 2015). However, as social media platforms such as Facebook and Twitter have been instrumental in fueling political protests and eventually regime change in many countries in the Middle East and in Eurasia (e.g. Tufekci, 2017), almost all Central Asian states have been cracking down on political communication through social media in recent times (discussed in the next section). Nonetheless, social media remain very popular and widely used platforms throughout the region. This section examines the use of social media in each of the countries studied.

Kazakhstan

There were 13.80 million social media users in Kazakhstan as of January 2022, which was equivalent to 72.3 percent of the total population (Digital Report Kazakhstan, 2022). Instagram remains the country's most widely used social media platform. According to Meta, the US based company that owns Facebook, Instagram, and WhatsApp, Instagram had 11.75 million users in Kazakhstan in early 2022 or 61.5% of the population (Digital Report Kazakhstan, 2022). Facebook remains the country's second largest social media platform, with around 2.30 million people or 16.66% of the total number of social media users who used the platform on a regular basis in early 2022 (Digital Report, 2022). Of these, 52.2 percent was female, while 47.8 percent was male (Digital Report Kazakhstan, 2022). Far less people use LinkedIn. Figures published in LinkedIn's advertising resources indicate that LinkedIn had 1.10 million subscribers in Kazakhstan in early 2022. Even less is the number of people who use Twitter for daily chats and reading news. Numbers published in Twitter's advertising resources indicate that Twitter had 202.9 thousand users in Kazakhstan in early 2022 or 1.47 percent of the total users.

Kyrgyzstan

In Kyrgyzstan, of total 6.68 million population, there were 3.60 million social media users as of January 2022, which was equivalent to 53.9 percent of the total population (Digital Report Kyrgyzstan, 2022). Among them, there were 768.7 thousand people or 21,35 percent of the total users who used to browse in Facebook regularly. Like in Kazakhstan, LinkedIn and Twitter were less popular among social media users in Kyrgyzstan. The number of people using Twitter as a social network platform was 65.5 thousand users, or just 18.0 percent of the total users at the time, according to *Digital Report*

2022 (Digital Report Kyrgyzstan, 2022). The number of people using LinkedIn proved to be the least used social media platform with only 160.0 thousand active subscribers or just 4,44 percent of total users. By contrast, Instagram was used by 2.95 million people in Kyrgyzstan in early 2022, or 44.2 percent of the total population (Digital Report Kyrgyzstan, 2022).

Uzbekistan

Although Uzbekistan is the most populous country with 34.16 million people (as of January 2022), only 6.25 million people or 18.3% of the total population used social media for personal communication and as a news source, according to Digi-

tal Report 2022 (Digital Report Uzbekistan, 2022). Among these, there were 1.55 million people or 24,8 percent of total users who used Facebook in early 2022. There were more men (67.1%) than women (32.9%) who used Facebook. The next most popular social media platform was Instagram, which was used by 4.80 million people or 76,8 percent of the total users in early 2022. In contrast, and similar to the previously studied countries of Kazakhstan and Kyrgyzstan, LinkedIn and Twitter were not as popular and were used by only 340.0 thousand (5,44%) and 29.0 thousand people (4,64%), respectively (Digital Report Uzbekistan, 2022).

The figure 1 below summarizes the results of social media usage presented in this section.
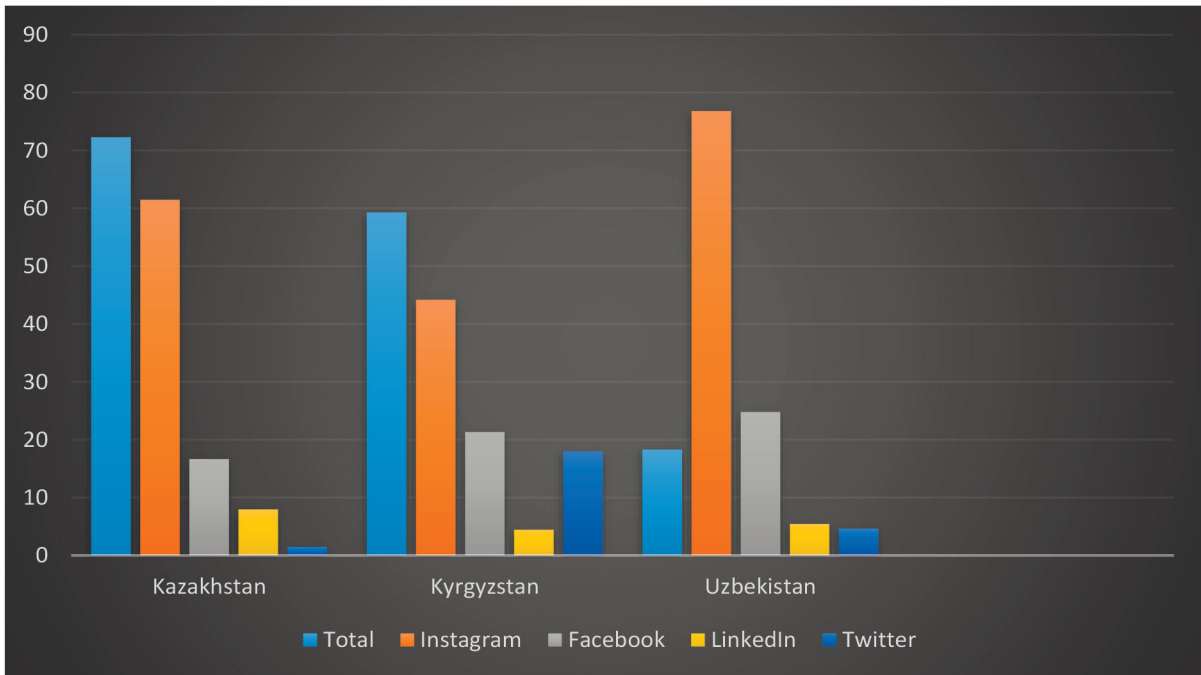
Source: Own construction

Figure 1 – Social Media Usage in Central Asia, %

Political Context and Regulations

As can be seen from the preceding analysis, the Internet and social media have undergone remarkable development in the three countries studied over the last three decades since independence and have become the main platform and forum for personal communication, political participation, civic activism, business interests and the like to this day. In response to the growing importance of the Internet

and social media in particular, and out of fear that social media could spark social unrest as it has in other countries, all Central Asian governments have developed strict regulatory frameworks to steer the development of social media in the country (Brian et al., 2012; Riyaz, 2020; Dall'Agnola & Wood, 2022).

There are, however, some notable differences in the regulatory frameworks among the countries

studied. On the one hand, we are faced with a more or less democratically minded government in Kyrgyzstan, a strongly autocratic regime in Uzbekistan and Tajikistan, and a rather anocratic (hybrid) regime in Kazakhstan. The differences in political leadership have affected the development of the Internet by bringing different regulatory environments to Internet service providers and users.

With regard to media policy in Kazakhstan, for example, reference is often made to an "autocratic media model" in which all print and online media are subject to strict regulation and control by the state (McGlinchey & Johnson, 2007). Especially after bloody January events in 2022, the state has taken a very harsh stance against new media. For example, in May 2022, the government signed amendments to child protection laws requiring social networking platforms to appoint a special representative to liaise with Kazakh government authorities and remove illegal content related to cyberbullying within 24 hours (Raissova, 2023). The Kazakh government also reserves the right to restrict the activities of platforms in case of non-compliance with the law. Moreover, since reforms in 2010, all international data traffic has been handled by the national operator JSC KazakhTelecom, which in turn is subordinate to the government (Raissova, 2023). Furthermore, according to the decree dated back from 2018, the Ministry of Defense, the Interior Ministry, the Prosecutor General's Office, and the National Security Committee have priority access to telecommunications networks, as well as the right to suspend the operation of these networks in case of an emergency or risk of an emergency (Raissova, 2023). Another notable rule which has been in place since 2014 foresees that the Prosecutor General's Office has the authority to issue orders to disconnect communications services without a court decision if "networks are used for criminal purposes aimed at harming the interests of individuals, society or the state", including distribution of illegal information, calls for extremism, terrorism, mass disorder, or participation in unauthorized mass gatherings (Raissova, 2023). In this connection it is also worthwhile to mention attacks on independent journalists and media sources that have increased over the last few years, including setting on fire a car of a prominent blogger Dinara Yegeubaeva in January 2023, breaking windows of El Media's news office in Almaty, and attacking the office of Orda Media. Against the backdrop of these and other abuses, the Freedom on Net Report 2022 has classified Kazakhstan as "not free" (Raissova, 2023).

Similar policy "model" applies to Uzbekistan, which, according to some observers, is even described as "the enemy of the Internet" (McGlinchey & Johnson, 2007: 275). As in Kazakhstan, broadband is provided to all providers in the country by the national telecom operator, UzbekTelecom, through its international packet switching centre (Tursunova, 2022). Under Uzbek law, every Internet user, regardless of whether he is a citizen of Uzbekistan or not, is a blogger and is thus liable for any information he or she posts in the internet, including those critical of the government and state, according to the Information Law from 11 December 2003. Social network platforms such as Facebook, Youtube and Instagram have been repeatedly banned or disabled at the discretion of the state officials. Consequentially, in Reporters Without Borders' (RSF) 2022 press freedom ranking, Uzbekistan was ranked 133rd (Kazakhstan ranked 122nd) out of 180 countries (Tursunova, 2022).

Kyrgyzstan has unfortunately followed a similar trend to its neighboring states over the last decade. Prior to that, the state was still considered media-friendly. For example, before 2010, Kyrgyzstan had not one, but up to 15 private broadband providers, which has ensured that there has been competition in the media sector (McGlinchey & Johnson, 2007: 279). Even though there was also a centralized operator, KyrgyzTelecom, according to McGlinchey and Johnson, it was limited in its monopoly power, and thus could not cap access for other providers (McGlinchey & Johnson, 2007: 280). However, the situation has worsened since the ascendance to the president's office by Sadyr Japarov in October 2020. As result, in October 2022, the new administration submitted a new draft law on mass media for public discussion (Kyrgyz Government, 2022). The law foresees a restriction of the rights of social media users, especially independent media makers and bloggers. It will affect not only media and journalists, but also websites, bloggers and active Internet users. The latest blow to the social media and the freedom of expression in general was in January 2023 when the authorities in Kyrgyzstan have applied to a court to close Radio Azattyk, the national service of the US broadcaster Radio Free Europe/Radio Liberty (Amnesty Internationl Kyrgyzstan, 2023). As result of all these developments, Kyrgyzstan has dropped 50 positions in the new 2023 World Press Freedom Index and now ranks 122 out of 180 countries (Reporters Without Borders, 2023).

Conclusion

Overall, the use of the internet and social media in Central Asia has increased significantly in recent years. Access to the internet has improved significantly as infrastructure in the region has improved rapidly. Kazakhstan in particular seems to be leading the region in internet and social media use, reversing the trend of the past when Kyrgyzstan was the favourite. This can be attributed to the country's level of socio-economic development, which exceeds that of neighbouring countries, as well as the numerous investments made in the past in ICT development in Kazakhstan. Overall, however, it can be noted that more and more people have access to the internet, whether via mobile devices or fixed broadband connections. Although the region still faces some challenges in terms of access and censorship, it is safe to anticipate that the internet and social media will continue to be important tools for communication and activism in the region.

In this article, we sought to examine, update and map the use of the internet and social media in the region. Although it has been a modest undertaking, it can still be used as a basis to pursue questions that would explore the use of the internet and social media somewhat more rigorously. For example, based on the data in this paper, one could explore the contribution of the Internet and new media to local economies in the region. There is a growing body of literature on this nexus for the context of other countries (e.g. Avom et al., 2021), however excepting Central Asia. More specifically, it can be explored whether there is a correlation between investment in telecommunications infrastructure and economic growth. Furthermore, it would be compelling to investigate to what extent the use of the internet contributes to job creation, poverty reduction and improved welfare and general well-being in the region. Another fruitful endeavour where future studies can build on this study is to analyse how the internet and social media are used as a means to empower social movements in the region. Although some work has been done in the past, there is still a lack of understanding of this relationship.

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