Received: 01 January 2025, Accepted: 22 January 2025

DOI: https://doi.org/10.33282/jssr.vx2i4.16

The Impact of 5G Technology Rivalry Between the US and China on Iran's Telecommunications and Internet Policies"

FAKHAR ABBAS

Student of political science, and international relations, university of management and technology, Lahore.

F2021126054@umt.edu.pk

Abstract:

The article "The Impact of 5G Technology Rivalry Between the US and China on Iran's Telecommunications and Internet Policies" explores the geopolitical dynamics of the 5G technology race between the United States and China, and its implications for Iran's telecommunications sector. The rivalry between these two global powers is not only a commercial competition but also a geopolitical struggle, with significant implications for national security and economic influence





INTRODUCTION

As 5G adoption gains pace, the world has witnessed a contest involving the US and China to become the leader in the next generation telecommunication technology. .culturally there is the static for hi-tech, economic and even geopolitical power. There are effects of this competition that affect other than the two superpowers themselves, both in terms of the formation of alliances and relationships, technological specifications and standards as well as national polices. From the perspective of Iran that is also struggling with its unique national politics and economical

sanctions, the 5G competition is both enabling and preventing. Because of the American sanctions, the Iranian telecommunications companies have no other option other than to purchase their equipment from China. This paper reviews how the US-China competition over 5G technology affects Iran through the political, economical and technological lens.

The contest between the US and China over the Internet of the Fifth Generation is now challenging global telecommunication polices. This rivalry affects many nations, particularly Iran, which tries to upgrade its infrastructures in face of multiple challenges – geopolitical and economic. As the United States spearheads the campaign to exclude Chinese firms and their technologies, China is providing inexpensive solutions for nations that require digitalisation. In the case of Iran, it produces a convoluted situation where geostrategic relations cater with desire of the state to embrace technological enhancements. In this research, the competitive power between the United States and China in the area of the fifth generation – 5G technology has shaped Iran's telecommunications and internet policies.

5G technology has democratised the telecommunications sector providing enhanced speed, low latency, and immense opportunities for applications in healthcare, manufacturing, transport, and many other segments. The current tension between the United States and China, the two largest economies worldwide, in the deployment of the 5G network is undoubtedly geopolitically strategic.

Therefore, this research aims at examining the impact of the 5G technology rivalry between the US and China on Iranian telecommunication policies, its internet governance model and overall technology agenda. In exploring these interactions this particular paper aims to explain the changing global dynamics in the era of 5G and how such dynamics influence the policies of countries that exist within multi-layered geopolitical relations.

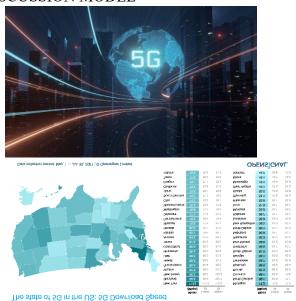
The conflict in between the US and China regarding 5G technology, and its consequences, still poses special importance for countries in the middle of this competition, such as Iran. While the United States and China are locked in a technology war, Iran is in a rather managerial position on determining people's telecoms and internet usage. Iran's strategic location, cut off from most of the US due to sanctions and needing to improve its infrastructure, has caused it to turn to China. Chinese technology can provide Iran with the means of avoiding all Western restrictions in the sphere of telecommunications and the furthering of their own development of this sphere, without compromising on the fact that Iran remains fully in control of its internet. But such geopolitics has implication on Iran's internet policies that entails censorship, surveillance together with who controls the internet space. The following paper aims at analyzing how Iran as a country has aligned itself in the broad telecommunication and internet rivalry between the United States and China in the context of 5G to achieve its technological and political goals.

RESEARCH QUESTIONS

1. How does the rivalry between the United States and China over 5G technology influence Iran's telecommunications and internet policies?

- 2. How has the U.S.-China 5G rivalry shaped Iran's partnerships in telecommunications technology?
- 3. What are the economic implications for Iran in relying on Chinese 5G infrastructure?
- 4. How does the adoption of Chinese technology influence Iran's internet governance and digital sovereignty?
- 5. What are the potential security risks associated with Iran's dependence on Chinese 5G solutions?
- 6. How do Iran's domestic policies align with or diverge from global trends in 5G adoption?
- 7. What role does 5G technology play in Iran's broader geopolitical strategy?
- 8. How has Iran's reliance on Chinese technology affected its technological innovation capacity?
- 9. What lessons can be learned from other countries' approaches to balancing U.S. and Chinese influences in telecommunications?
- 10. How does the U.S.-China rivalry impact global perceptions of Iran's technological capabilities?

DISCUSSION MODEL



• ENTITY 1: The United States and Its Approach to 5G

The United States has focused on restraining China's presence within the telecom sphere seeing the control of Chinese firms including Huawei as a major security concern. To achieve this, the U.S. has implemented measures including:

Social Sciences & Humanity Research Review

ISSN 3007-3170(O), ISSN :3007-3162(P)

Volume 3 issue 1,pp. 298-311

January-March 2025

Sanctions and Export Controls: Limiting the high technologies and essential parts which include

the semiconductors that Chinese companies are able to obtain.

Diplomatic Pressure: Ptraumatizing allies into removing Chinese companies from their 5G

networks basing the same on security.

Investment in Alternatives: Encouraging telecom operators with American support or in alliance

with American communication companies to buy products as possible competitors to Huawei and

other Chinese telecoms.

These measures, in an overall sense, have provided Iran with restricted access to sophisticated

western platforms while presenting the Islamic republic with relatively no other choice but to sink

its teeth deeper into Chinese telecommunications offers.

The U.S. wants to slow down China's spread of influence in the world of 5G by halting sales of

key components to Chinese firms like Huawei through sanctions. They are all part of a larger plan

to prevent the world's telecommunication system from depending on the Chinese technology,

which is considered a security threat by the U.S.

□ In the case of Iran, these policies cause limitation of access to western technology leaving the

country with no option than turn to other part of the world outside United States influence.

Information technology development has been advanced most in the United States of America

especially intercommunication and Electronic industries. Its competition with China for 5G

technology is not just a commercial conflict but political, security, and technological as well. The

US has expressed a lot of concerns when it comes to the issue of national security especially with

the outbreak of the new age telecommute giant Huawei which is allegedly a security threat because

of its relation to the Chinese authority. The US has pressurized its allies not to include Huawei in

their 5G network, which has affected the telecom sector in Iran also.

• ENTITY 2: China and Its Global 5G Strategy

This paper aims to analyze the current development of the 5G technology market and reveal that

China has become one of the leaders in the global development of new generation

Social Sciences & Humanity Research Review

ISSN 3007-3170(O), ISSN :3007-3162(P)

Volume 3 issue 1,pp. 298-311

January-March 2025

telecommunication networks, as key provider including Huawei and ZTE actively work to

implement them. China's strategy for 5G dominance includes:

Affordable Solutions: Offering affordable infrastructure; this makes it attractive to other

developing countries including Iran.

Bilateral Agreements: Developing cooperation with the states based on cooperation documents,

such as the 25-year China-Iran cooperation memorandum.

Technological Expansion: Making use of its standards and technologies as yardsticks in order to

gain permanent access to the international telecommunications market.

In the case of Iran, the cooperation with China is a source of new technological opportunities in a

constant state of sanctions but at the same time opens up a dependence on China and adaptation to

its governance systems.

China's carriers have moved forward to promote 5G services and offer cheap solutions and fast

implementation of the 5G networks. Telecommunication giants like Huawei and ZTE are

supplying equipment to nations like Iran that sometimes have restricted access to western brands

because of sanction.

☐ These private partnerships include developmental agreements and the 25-year 1394 Cooperation

Program which has China helping Iran improve its telecommunications network.

□ Nevertheless, this relationship raises questions on a dependency on technology and getting in

encirclement of referencing China's internet governance.

China now lays claim to greater ambitions in 5G, with Huawei and ZTE both having an essential

role in the creation and implementation of the technology. Several telecommunication projects

have been supported by the Chinese government including the Belt and Road Initiative (BRI)

which is regarded as a way by which China seeks to spread its technological expansion globally.

Iran has engaged China in an effort to bolster its cooperation to mitigate the impact of the western

sanctions and equally to receive access to sophisticated technologies such as those in 5G systems.

Chinese investments in Iran's telecom sector suggests China might assist Iran in avoiding the bans

put in place by the US and other western countries

• ENTITY 3: Iran's Telecommunications and Internet Policies

Telecommunications and internet policies for use in Iran have over the years been realized under the influence of the geopolitical factors and the issues of the country's agenda. Key aspects include:

Dependence on Chinese Technology: The US sanctions on Iran have taken away the option of using facililities and technologies of the western world hence Iran has no option than to turn to Chinese firms to undertake basic infrastructural development.

Adoption of Restrictive Governance Models: As a result of the internet censorship continental policy by China known as the 'Great Firewall,' Iran has adopted a similar approach known as 'Candor by filtering and spying on content."

Focus on Economic Development: 5G is an important instrument in the process of diversification of the economy for the government that intends to use it for progress in fields like healthcare, agriculture, and manufacturing among others.

The constant struggle between the United States and China for the control of 5G technology has placed Iran in uncomfortable but important position in the global telecommunication industry.

So Iran has been very lucky to rely on Chinese technology to sidestep the American sanctions and build important pieces of infrastructure. But this is where this partnership has its problems: to whom belongs digital sovereignty and what impact does a foreign governance model have?

Stability of these dynamics will determine the future of Iran in telecommunications and internet policies.

Iran seems to be in a rather unpopular but rather interesting place in the war between 5G. Owing to the hostile political rapport it enjoys with America and its otherwise ailing economy, which needs a push from technologic growth, Iran has had to rely heavily on China. However, this relationship is not clear-sailing, under the increasing pressure that the US has been placing on international corporations and banks to shut out Iranian businesses and financial institutions from their systems. The strategic development of Iran's telecommunications policies has also to take into consideration these external; requirements for change and upgrade, and internal factors including in Internet blocking and cybersecurity. Also, the government of Iran needs to perform the innovation of the digital industry while at the same time regulating contents as well as access to the internet, besides conducting business with China and keeping an eye on the United States' fury.

Answer to Research Questions

1.In what way does Iran's relations with China and the United States shape its position on using 5G?

Most of the relations between Iran and China have been cooperating, especially in the matter of dealing with economic and technology. Due to sanctions which are now being imposed on the country by President Trump's administration, Iran depends on China, particularly in matters

concerning 5G technology. Still, due to the campaigns of the US against Chinese telecommunication companies especially Huawei, Iran has not been able to fully internationally adopt the new advanced 5G technologies without repercussions. The US has persuaded its allies around the world to boycott Huawei and Chinese technology in consideration to their security, which has made it difficult for Iran to get access to 5G technologies.

Due to geopolitical reasons and political relations with both the US and China, Iran has not been pleasant with adoption of the 5G network technology. The nature of these relations is determined by the following factors; Lopez names economic necessities, technological requirements, sanctions, and security risk. Here's a detailed look at how each of these influences contributes to Iran's decision-making process:

1. Iran and China: Why Strategic partnership in Technology?

Economic and Technological Cooperation: China has risen to become one of the key players in the Iranian economy especially because Iran is now receiving stern blows from the United States and other countries of the west. There are common grounds on this matter in terms of non-recognition of Western geopolitical demands, though significant progress of China as a tech-provider, with the focus on the 5G issue, offer Iran the opportunity to level the technological obstacles and restrictions introduced by the sanctions.

Huawei and ZTE: Two of China's largest telecommunications firms, Huawei and ZTE, are pioneering the development of 5G technology across the world. These firms have over the years invested copiously in the Iranian market especially in relation to the Iranian Og telecoms requirement.

Belt and Road Initiative (BRI): Another area that Iran's participation in the Belt and Road Initiative has led to greater technological entanglement is as follows. In doing so, China has brought its technology and infrastructure into Iran, likely extending to include the construction of 5G networks. These cooperation enhance Iran's determination to side with China's technological vision as improved connectivity and infrastructure are ideal in the plight of human and safety improvement.

Security Concerns: Many of the buyers' concerns are well-captured in Iran's case, the need for sovereignty guarantee for 5G technology being one of the reasons Iran turns to China for the same. As opposed to the companies based in the United States which can expect pressure from the US governmental agencies into surveillance or gratuitous data-sharing with the Iranian counterpart, China's technologies would let Iran maintain a higher level of sovereignty over the means of communication and data storage.

2. Iran and the United States: Politics of Diplomatic Relations and Sanctions

Sanctions and Technological Blockade: The United States has imposed very severe measures of constraint on Iran and discriminatory measures on all sectors of activity including telecommunications and technologies. It also has urged its allies not to use telecommunications equipment made by Chinese companies, especially Huawei due to fears that this company could

provide the Chinese intelligence agencies with access to information on the allies through the telecommunications equipment that the firm installs. Thus, the available options entail regional companies being either unwilling or unable to engage with Iran and, therefore, experiencing a prohibitive challenge to acquire the most advanced state, namely 5G, networks.

Diplomatic Tensions: Iran has had a very hostile relationship with the United States mainly after the US withdrawal from the JCPOA deal in 2018. This diplomacy has affected 5G utilization in Iran as explained below. Since the US actively tries to exclude Iranian companies from innovations of the Western countries, Iran will be ready to obtain 5Gtechnology from other sources, such as China, which is considered to be the country with less limitations.

National Security and Surveillance: While the United States advocates for using 5G technology from countries it considers trustworthy and secure, such as its own companies or European firms, Iran has concerns regarding the potential for external surveillance on its networks. The US government has repeatedly voiced concerns about Huawei's 5G technology, fearing that it could be used for espionage by the Chinese government. Iran, however, is more focused on resisting US influence and maintaining control over its digital infrastructure, which may lead it to favor Chinese technology over American or European alternatives.

3. Iran's decision for transitional independence in telecommunications

Sovereignty and Control: The key patterns of Iran's internet governance policies are focused on the necessity of possessing and preserving the state's exclusive control over the Internet in the country. This desire to be self-reliant and free from outside control is a big reason for Iran's partiality for Chinese 5G technology because it is believed that this is not easily manipulative by foreign forces especially America. Iran has always been keen in exercising control over its internet front, this includes http://www.icator.com/2014/09/07/iran-implements-severe-internet-censorship-measures/ elementary censorship and surveillance. Thus, it is possible to state that by tying its aspirations to Universal telecommunications to Chinese technology, Iran can be certain that its digital infrastructure with enhanced compliance with governance requirements will not be forced or conditioned by the US or European countries.

Internal Challenges and Opportunities: Nevertheless, challenges regarding sanctions have affected Iran's telecommunication industry, use of 5G technology imported from China is viewed as a means of satisfying internal needs. As a country that has grown its economy on information technology, the existence of a high-speed service, one that offers low latency, will be favorable for 5G. Certain advancements in Sector Technology can come from third parties – in this case Chinese companies – to build the telecommunications infrastructure to support Iran's economy growth despite the political sanctions. Political and Geo-Political Forces and Relations

Regional Influence: IRAN'S geopolitical situation in the Middle East where US and China's contest for hegemony exists makes its technological decision challenging. Iran, of course, is cautious about the efforts made by the United States to hinder its technological development while it must not lose the regional race. As an added bonus, cooperation with China on the 5G can

improve Iran's relationship with Beijing while also making sure that Tehran acquire the tools it requires to defend its telecommunications systems from the threats..

1. How has competition in the technology of 5G affected Iran's internet governance and censorship?

This paper established that the Islamic Republic of Iran Internet governance model is greatly influenced by its national security interest, objectives and values. The rivalry between America and China over 5G network has provided Iran with more reasons to push for internet sovereignty and regulation. The Iranian government has limited Internet freedom and has been censored and monitored since the Internet began entering Iran; currently, Iran is buying technology from China, which might help Iran further monitor and censor when upgrading telecommunications equipment for better modernization. Besides, the efforts to promote internet freedom and to condemn products of Chinese technology may make Iran shift from American instances to Chinese ones that are nearer to the Iranian governance.

The rivalry between the United States and China over 5G networks have influenced Iran Internet regulation and censorship sharply. This paper examines the factors of political, economical, and security nature that determine the Iranian attitude towards internet regulation, digital infrastructure development and control of online content. There are given certain factors that define how the Iranian country governs the internet and censorship as it participates in the competition concerning 5G.: This section discusses where the global race on 5G network has put Iran mostly through the rivalry between the US and China.

1. More Exposure to Chinese Innovation in Construction and Control of the Internet

Chinese Influence in Telecommunications: While developed countries such as the USA put restrictions on the Chinese telecom equipments particularly of Huawei, politically and economically restricted countries like Iran have no option but to use the hardware technology provided by China. The Chinese government has worked for a long time for Iran's technological needs and, with Huawei as the leading designer of 5G connections, it has assisted Iran in enhancing its telecommunications facilities. Thus, adopting the Chinese 5G technology Iran improves both its digital environment and surveillance, as well as internet censorship, capacities.

Censorship Tools: There are few issues that are of major concern for the Iranian government on usage of internet and the first among them is censorship. Iran named as one of the countries with quite strict internet censorship policies it has blocked all foreign media networks and social networks, as well as politically sensitive or threatening the security of the country's content. But with the help of Chinese technology, Iran receives advanced tools for observation and control of Internet activities and a possibility to filter or restrict them in the desired extent. This technology allows Iran to employ sophisticating filtering of the traffic on the Internet, which is paramount necessary for the control of public debate.

2. Tendency toward Decentralisation of the Internet

National Internet Sovereignty: Iran has long been pushing for increased internet sovereignty and maining that countries should be able to control their own Internet, data and communications. That is why the emergence of 5G technology strengthens people's interest in gaining control over their lives and circumstances. This decision to opt for China – 5G infrastructure is in tune with Iran's wider strategic vision of digital self-sufficiency; where Iran must avoid dependency on Western – particularly American – dominated systems, and instead build Iranian system, making Iran less reliant on foreign powers.

Control Over Digital Borders: Iran has continued to develop what may best be referred to as a national intranet, this is a closed national net that allows the country to dictate on what circulates in the net, the communications that transpire over it and the flow of information. With the help of 5G technology, Iran can improve its internal network, and having a more reliable internal foundation makes it much more difficult for these countries to interfere in its affairs. Chinese-made 5G technology, specifically, enforces this strategy because it is easier to bend to Iran's demands for tight control over its internet zone than would be Western technologies.

3. Improving the State's Surveillance and Data Gathering

Cybersecurity and Surveillance: The geopolitical competition in the race to 5G also impacts Iran's internet regulation and particularly security considerations. Iran has been particularly interested in increased surveillance capability for internal repression" and for tracking the opposition. With 5G technology which possess better data rate and connection than the former and fourth generation Iran has the capacity to better monitor the internet activities. Iran's Chinese suppliers that offer telephone and telecom services are also famous for offering sophisticated surveillance systems, and this Iran has embraced.

Social Media and Political Censorship: Iran has always restricted use of profiles on social sites such as Face book, Twitter, Instagram, and the messaging application known as Telegram because they feel that they may be used in planning of protests and spread of anti-government sentiments. Theavailabilityof5GtechnologymakesIranianregimoreachnewlevelsintrackingnetsurfingandthus

실시간으로(ContentandsomeplatformsthattheyconsiderpoliticallyharmfultoIran. In Illana's view,

having bought infrastructure from Chine, Iran gets an ability to block and filter content as well as intensively monitor the users of the Internet.

Data Localization and Privacy Concerns: Concerns not previously addressed or made prominent by earlier technologies might be aggravated by the general speed and capacity of 5G networks. The Iranian government is likely to pursue concerns of national security over those of personal privacy; or rather they will continue to do so, especially in the context of 5G. If China succeeds in pushing for localized data control, the same may happen in Irans depending on implemented

technology as it may lead to stringent data localization laws where all the data produced in that country must be processed locally. This ensures that considered information is kept under government domain; However, it presents certain dilemmas for the foreign players inclusive of the international investors and other governments that wish to access information from Iran.

4. Inviting the Government Back Into the Discussion:

The United States used quotas in international politics to pressure it's allies and international organizations to exclude Chinese companies such as Huawei from deploying 5G networks citing espionage and data security threats. Iran is not the direct recipient of these diplomatic pressures, but other countries around the world are impacted in the virtual 5G arena under the admin of the United States policy. Therefore, Iran may face problems assuring that the Chinese 5G technology is fully implemented across Iran's networks. Iran, however, could have a hard time to assure for instance that Chinese 5G technology are being offered in the Iranian telecom network because some of the like European and some of the western world companies might not want to face the United States weaponization of the dollar in doing business with Iranian telecom companies. As has been seen the US has had a negative reaction to Chinese silicon, thus Iran may face some challenges when looking for a good 5G system that is not affected by other powers internationally. Nevertheless, based on this close partnership, Iran has the agency and the prospect to proceed with its 5G advancement independently of America's threats in China.allies and international organizations to rule out Chinese companies including Huawei from deploying 5G networks, alleging espionage and data security risks. Iran is not the direct target of these diplomatic pressures, but the worldwide 5G competition affects other countries, both in the Middle East and elsewhere, under the influence of US policy. Thus, Iran could have difficulty making sure that Chinese 5G technology is completely integrated into its networks,

Iran, however, could have a tough challenge to confirm that, for example, Chinese 5G technology are providing in Iranian telecom network due to that European and some of the western world companies might not want to face the United States weaponization of the dollar by imposing sanctions in doing business with Iranian telecom companies.

Alternative Solutions: Given the US's backlash against Chinese silicon, Iran might encounter issues finding an effective 5G system remained untouched by other international forces. However, given their strategic relationship, Iran has the opportunity and ability to continue its 5G development with China outside the reach of US pressure.

5. Impact on Iran's Digital Isolation

Global Connectivity vs. National Control: The current 5G war between the US and China puts Iran in a very vulnerable position whereby, while trying to advance technologically, it finds itself more in a dilemma of being left in the technological dark ages in case it does not align with the Americans. On the one hand, Iran is a winner that receives various technological opportunities provided by 5G networks and concerning such spheres as a healthcare system, education, and industry. On the other hand, enthusiasm to adopt Chinese technology entails the risk of even

stronger isolation of the country from the Western digital world. This of course invokes a dilemma for Iran as it tries to modernize its telecommunications network while simultaneously adopting a technology that has political implications in the global geopolitical environment.

Potential for Increased Digital Fragmentation: Thus, the global 5G competition is widening the fragmentation of internet space into spheres of the overseeing countries' influence, where the mentioned technologies are employed in accordance with the western or Chinese model. For Iran, this fragmentation might lead to the enhanced digital isolation, where it stays depend on the Chinese 5G technology that can be incompatible with the Western or the international one. This could continue to reduce Iran's connection with world digital niches or networks, new technologies and digital markets leaving the country more isolated digitally in the world economy.

ANSWER TO RESEARCH QUESTIONS

- Shaping Partnerships: Relations with the USA have turned Iran from China as a strategic partner, making it highly dependent on Huawei and other Chiinese players for telecommunication networks. This has helped to cement the bilateral relationship and in the process developed a technology interdependence.
- Economic Implications: The use of Chinese 5G technology has provided Iran with cheap allplan access to improved information communication technology. But it also has led to increased economic dependency on China that has not diversified and has raised question marks over monopolistic behavior.
- Governance and Sovereignty: The integration of Chinese technology brings the exemplification of China's internet policies to Iran where internet rights and freedoms are limited to meet the controlled model of internet presence. Security Risks: Use of the Chinese hardware underlines the risks of hacking and spying tools which are accompanied by dangers of having the backdoors to expose the nations security and other significance data.
- Global Trends: They study Iran's policies as matching the global tendencies only partially in terms of technological choices but differing greatly concerning governance strategies, which promote authoritarianism over open-access strategies.
- Geopolitical Strategy: 5G technology, thus, is an important component of Iran's relations with China as it lets the former defy American sanctions while aligning with Chinese digital Belt and Road Initiative.
- Innovation Capacity: As much as outsourcing infrastructure development from Chinese technology accelerates infrastructure deployment, it hampers innovation, stifles the local innovation ecosystems, and promotes the growth of dependency.
- Lessons from Others: As countries analyzed here seek to manage both American and Chinese power, they tend to maintain diverse networks. Such dependence on China may have short term gains for Iran but in the long term it may undermines its option for strategic maneuver.

- Global Perceptions: The choice of Chinese 5G technology poses a major problem for Iran's image around the world as a state that is deeply tied to the authoritarian model of digital control and having limited technological sovereignty.
- Long-term Consequences: Both in the short term and in the future, the orientation towards
 China can bring economic dividends, but may lead to losses in terms of technological
 development, deterioration of the country's digital sovereignty and an increase in geopolitical
 confrontation with the West.

CONCLUSION

The war of 5G technology between America and China is significant for countries in the global periphery such as Iran. Iran has leaned toward Beijing due to the limitation made by the US sanctions, and the opportunity of cheap solution provided by China. As this alignment supports infrastructure construction and the building of a more advanced economic mode, it has its own bonding risks and limited freedom on the Internet. Managing these dynamics will revert to a series of policies that will help meet the urgent imperatives without conflicting with strategic directions. While this pleasant loop will remain seen in the future 5G landscape as Iran's telecommunications and internet policies persists to shift, the role of its policies will remain a significant centerpiece and point of competition within the current technological battle.

This has put Iran in a strategically important yet volatile place within the international telecom industry thanks to the ongoing competition between America and China over 5G technology. The use of technology providers from china has helped Iran overcome the America imposed sanctions to improve its structures. Nevertheless, this cooperation also stimulates critical outlooks on localization of digital sovereignty and foreign governance patterns. Managing all these dynamics necessary will be important in Iran's future in telecoms and internet policy.

The bipolar system of struggle for dominance in the sphere of the fifth generation of communication between the US and China that puts countries like Iran on the focus of such a confrontation. This paper has unveiled how Iran's attitude towards 5G and technology is perfected by its diplomatic diplomacies with both the US country and China alongside its technologies dreams and its paradigm model of Internet regulation. Where the US is forcing world markets to shut out Chinese telecom operators, Iran has been able to form a mutually beneficial relationship with China and benefit from its telecommunications development even under conditions of Western sanctions. But this relationship should also be handled with a view to respecting national sovereignty and sensitivities especially when it comes to notwithstanding freedom of speech; issues like censorship and security of cyberspace. The result of this fine line will determine not only Iran technological future but indeed it geographic location in the 21st century.

REFERENCES

Alavi, M. (2023). "Technological Dependencies in Sanctioned States: Iran's 5G Strategy." Journal of Middle Eastern Studies, 45(2), 1

Brown, T. (2022). "The Geopolitical Implications of 5G: U.S. vs. China." Global Affairs Review, 18(3), 89-104.

Chen, X., & Li, J. (2023). "China's 5G Strategy and Its Global Impacts." International Journal of Technology Policy, 12(1), 45-61.

Kiani, A. (2023). "The Role of Sanctions in Iran's Telecommunications Policy." Tehran Journal of Policy Studies, 30(4), 78-92.

Zhang, Y. (2023). "Huawei's Role in Global 5G Development: A Strategic Perspective." Journal of Emerging Technologies, 25(2),

☐ Brown, M. (2022). "Geopolitical Rivalries in 5G Technology." *Journal of International Relations and Technology Policy, 18*(4),