

# Iranian Internet Infrastructure and Policy Report

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## INTRODUCTION

Since the emergence of Bitcoin back in 2009, a variety of national governments have been grappling with the conundrum of how far they should recognise, and regulate the cryptocurrency. Whilst some countries including [Germany](#), [the United Kingdom](#), and [the United States](#) have taken a fairly laissez faire approach towards Bitcoin, the [Russian](#) and [Indian](#) governments have led the charge in pushing for greater state oversight.

Iran, meanwhile, has been far more sluggish in formulating a coherent Bitcoin policy - only in the early months of 2014 have politicians and regulators started to take an interest. Our report this month reviews the initial findings of Iranian research into Bitcoin, explores potential policy implications, and evaluates the impact of Bitcoin in Iran up until the present day.

Iran has been far more active on the web censorship front, however. This month's report also tracks the state's latest efforts to control and filter web content, ahead of the upcoming roll-out of Iran's 'intelligent filtering', or 'Favourable Cyberspace' system. This report also documents the progress of Iran's latest infrastructure development projects, as it pushes to modernise and expand the country's Internet infrastructure networks.

## BITCOIN IN IRAN

The increasing popularity of [Bitcoin](#) in recent years has prompted some countries, including Iran, to begin considering how the virtual currency might be regulated. In the case of the Islamic Republic, however, the specific details of this potential regulation remain unclear.



On 12 March 2014, Saeid Mahdavian, Deputy of the Regulatory Authority at the National Cyberspace Center (NCC), [announced](#) that Iran will start regulating Bitcoin by the end of 1393 (March 2015), and that the Supreme Council of Cyberspace (SCC) will be granted responsibility for the implementation of these new regulatory policies.

In addition, on 28 April 2014, the [Islamic Parliament Research Center \(IPRC\)](#) published a [report](#) reviewing the legal and regulatory status of Bitcoin. The report documents the government's concerns that Bitcoin may be used for illicit ends, such as money laundering, fraud, and tax evasion. Moreover, the report expresses anxiety about the potential for individual users to invest heavily in Bitcoin, thereby risking huge financial loss for themselves, and their families.

At the end of this report, the IPRC concludes that the government should more clearly define and regulate Bitcoin's position in the Iranian economy, and that new regulations should be enacted soon, before the popularity of the 'cryptocurrency' expands to the point that it becomes impossible to control.

### IS BITCOIN LEGAL IN IRAN?

The IPRC report makes clear Iran's generally ambivalent opinion of Bitcoin. Some political figures have spoken with more clarity about the position of the cryptocurrency, however. Naser Hakimi, IT Director of Iran's Central Bank, [stated](#) that the use of Bitcoin in Iran is illegal, under Article 2 of Iran's 'Money and Banking Act', which stipulates:

*'The official currency of the country comes solely in the form of paper money and metal coins. Only paper money and metal coins that have been produced after the enactment of these regulations are legal tender.'*

Regardless of this legislation, many websites continue to buy and sell Bitcoin in Iran without issue, with Iranian users accessing Bitcoin sites freely via VPNs, and other circumvention tools. One of the pioneering Bitcoin markets is [CoinAva](#), a website registered in Australia selling bitcoins to Iranians. Another example is [IRChange](#), which allows Iranians to exchange rials (IRR) for bitcoins through Iranian banks.

Though the use of Bitcoin isn't particularly widespread in Iran, a few online stores do accept the currency (though notably, none of these online stores are officially registered with the [eNamad](#) eCommerce system). One example is the website [Persian Shoes](#), which sells individually-crafted shoes, which are produced by a [70 year-old Isfahani businessman](#).

**DOES BITCOIN HELP IRAN TO BYPASS SANCTIONS?**

On 29 November 2012, *Businessweek* published [an article](#) documenting how Iranians had used Bitcoin to bypass Western sanctions against Iran. The article noted that Iranians living and working abroad regularly sent bitcoins back to their families in Iran, who then exchange them for euros, rials or dollars. Additionally, the article highlights how some Iranian developers have asked their clients to pay them in bitcoins, instead of traditional currencies such as the US dollar.

Despite the economically revolutionary potential of Bitcoin, there is very little evidence to suggest a rapid uptake of the cryptocurrency in Iran since *Businessweek* published its 2012 report. In [an interview](#) with the *Angle Chronicle* from February 24 2014, Alireza Haghverdi, a researcher at Isfahan University, stated that: 'Studies suggest that Iranians are not interested in taking the risks associated with using Bitcoin mainly because of its excessive fluctuations against the world's major currencies,' and that users are further dissuaded by the fact that 'only a limited number of Internet users in Iran are able to exchange Bitcoins to local currency'.

As a result, Bitcoin has seen a relatively low uptake amongst middle class Iranians, with its use being largely restricted to a small group of tech-savvy individuals. With ongoing fluctuations in the value of Bitcoin, there is currently little in the cryptocurrency to attract any Iranians who may be seeking a stable alternative to the rial.

**CONCLUSION**

Small Media's investigation reveals that despite a clear message from authorities expressing their desire to regulate Bitcoin, the future of the virtual currency in Iran remains very difficult to predict. Although the government appears to be taking a hard stance against the currency, there have so far been no examples of the government taking action to crack down on users of Bitcoin, or to move towards tougher regulatory frameworks. The crucial question now concerns how Iran might go about regulating a decentralised currency such as Bitcoin - few countries have so far attempted to crack down on usage of the cryptocurrency, and those that have, such as Russia, appear to be [re-evaluating their stance](#).

## CONTENT FILTERING AND BLOCKED SITES

- **June 6:** Fars News reported that Iran's Domain Name System (DNS) servers were hacked during the last week of May. Further details about this incident have not been published. ([Source](#))
- **June 9:** Kamal Hadianfard, the Head of Iran's Cyber Police (FATA), announced that FATA had identified 3,851 websites selling illegal medicine. According to Hadianfard, FATA arrested 111 individuals and seized 53,420 medical items. ([Source](#))
- Tabnak published an article about the satellite installation industry in Tehran, criticising the ineffectiveness of existing anti-satellite policies. According to Tabnak, the turnover of this business is at least 100 billion IRR (3.8 million USD). The use of satellite dishes is forbidden in Iran, and authorities undertake semi-frequent efforts to find and confiscate them. ([Source](#))
- **June 17:** Google Play became available for Iranian users, who are now able to download and update their apps despite Google Play's 'http' address still being blocked in Iran. [Our investigation](#) suggests that a glitch in the filtering system is allowing users in Iran to freely use Google Play via 'https' protocols, rather than either Google or the Iranian government changing their respective policies. ([Source](#))
- **June 23:** An individual has been arrested by FATA (Isfahan Province) for abusing and insulting a young woman through Tango, a mobile communication app. According to FATA, the individual created a Tango profile, and sent pornographic images and criminal content to other users under the young woman's name. ([Source](#))
- **June 26:** Iranian users said that they were unable to see images on Instagram without the aid of a VPN, or other circumvention tools. The issue arose because Instagram moved its images from Amazon's cloud computing service to Facebook's data center. ([Source I](#), [Source II](#))
- **June 29:** Five Internet cafés have been shut down by FATA (North Khorasan Province) due to legal breaches. Internet cafes must follow a series of regulations such as engaging in CCTV surveillance, and keeping full records of all users' internet activity. ([Source](#))
- **Nokia Store** has lifted the sanctions put in place against Iranian users. Nokia restricted user access to its store as a result of Western sanctions imposed on Iran. ([Source](#))

## POLICY DEVELOPMENTS

- **June 15:** Ramezanali Sobhanifard, Head of Iran's Parliamentary IT Committee, announced that a workgroup has been formed in the Islamic Parliament Research Center (IPRC) to review and modify [Iran's Cyber Crime Law](#). The current cyber crime law is in a pilot phase, and will expire in the next year. ([Source](#))

## STATEMENTS FROM MINISTRIES AND POLITICIANS

- **June 1:** [Nameh News](#) had an interview with MP Mohammad Ali Esfanani, a member of the [Commission to Determine the Instances of Criminal Content \(CDICC\)](#), about Internet censorship. The following list contains highlighted sections of his remarks:

- The main decision-maker regarding Internet censorship in Iran is the CDICC, not the government. The law determines which websites and services must be blocked, and not the government.
- The CDICC makes its blocking decisions by two methods:
  - i. People report a website or service that has criminal content;
  - ii. Experts in the CDICC discover a website/ service which has criminal content.
- Iran is amongst countries that have less censorship of the Internet compared to other countries.
- The use of social networks is not in itself a crime, but these networks can serve as a venue for criminal activity. If the CDICC finds out that there is no criminal content on a social network, then the committee will unblock it.
- Filtering is not a comprehensive solution to the problem posed by online criminal content, but it does serve a purpose in that it acts to complicate and discourage public access to illicit content and activity. ([Source](#))

- **June 2:** Seyyed Majid Noorhosseini, Director of the [National Information Network \(SHOMA\)](#), announced that the project remains only 9.2% complete. According to Noorhosseini, SHOMA has 4 phases, of which phase 0 (Research) has been finished and 90% of phase 1 (Design and Limited Implementation) has also been completed. ([Source](#))

- **June 5:** The Telecommunication Infrastructure Company (TIC) announced that Iranian people spent 2,300,000,000 minutes making international calls in the last Iranian year (March 2013 - March 2014). ([Source](#))

- **June 7:** Mohammad Hassan Entezari, Secretary of the SCC, held a press conference at Mehr News Agency.
  - Highlighted points of this press conference are listed below:
  - There is not any conflict between the SCC and CDICC. According to Entezari, the SCC is the policy-maker and other governmental bodies such as CDICC just execute its policies.
  - All SCC members, including members from the government, agree with the organisation's Internet censorship policies and there is no internal disagreement about them.
  - The SCC will not enter into the Internet censorship process and the CDICC will retain responsibility for blocking different websites and services.
  - The new filtering policy has been prepared in the National Center of Cyberspace (NCC) after 18 meetings. The name given to this new policy is "Favorable Cyberspace (FC)", and the SCC will review the policy soon. Small Media was unable to obtain any further information about FC at the time of

writing this report.

- The SCC is working on the legal VPN project, and the blocking of circumvention tools. The legal VPN project has not been cancelled, though the SCC requires more time to complete the project due to its complexity.
- Iran is ready to launch the ‘intelligent filtering’ system, although there is currently a lack of policy and regulation around it. (Source)

• **June 8:** Hassan Karimi, Deputy Network Manager at the TIC, denied any problems in the company’s network, announcing that the TIC’s DNS servers are fully-functioning, without any technical glitches. The TIC holds exclusive rights to sell international bandwidth to Private Access Providers (PAPs) in Iran. (Source)

• **June 9:** Mohsen Erfani, Chief of FATA (Razavi Khorasan province branch) said Iranians should be wary of social networks such as Facebook as they have been ‘destroying Iranian families’. (Source)

• Hassan Karimi, Deputy Network Manager at the TIC announced that the ICT Minister ordered his company to improve the speed and quality of the Internet, setting a deadline for June 27. It remains unclear exactly what work the TIC has undertaken in this regard. (Source)

• **June 10:** Abbas Asosheh was appointed as a Supervisor of SHOMA by Entezari. Asosheh will create a committee to monitor and launch SHOMA by end of 1394 (March 2016). Small Media believes Rouhani’s government is very keen to launch SHOMA before its deadline and put all of its efforts towards keeping the project on the right track. (Source)

• SCC member Rasoul Jalili announced that the technical structure of SHOMA is ready, but stated that some high profile authorities lack a basic understanding of the project, which has delayed its launch. (Source)

• **June 11:** University and Howzeh lecturer Hojatoleslam Masoud Adib said that the blocking of social networks is not a solution to Iran’s problems, insisting that Iranian authorities should make use of them to promote Revolutionary ideology and Islamic values. Adib believes that some authorities would like to block social networks in order to shirk their responsibilities to the people, and avoid answering their questions. (Source)

• Ayatollah Seyyed Mohammad Vaez Mousavi, member of Assembly of Experts, said Iran cannot continue to resist social networks and authorities must educate people about their use. (Source)

• **June 14:** Entezari strongly criticised the ICT Ministry for failing to submit their timeline for SHOMA on schedule. (Source)

• **June 15:** Hamidreza Nikofar, Deputy Director of Mobile Telecommunication Company of Iran (MCI), said the data traffic has grown 500% since last year. (Source)

• Vaezi reacted to Entezari’s critique and announced that the conceptual model and timeline of SHOMA are ready and his ministry is ready to send it to SCC. It is not clear what this ‘conceptual model’ contains, although Small Media published a comprehensive report about the existing plans for SHOMA in March 2014. (Source)

• **June 16:** Vaezi said the government does not disagree with social networks but it instead supports the development of Iranian social networks, as the use of foreign-hosted networks such as Facebook and Twitter opens users up to foreign monitoring and spying. According to Vaezi, the government is ready to offer free data centers to Iranian developers for the development of mobile

apps and social networks. (Source)

- Iranian MP Ahmad Shohani said that despite initial benefits, blocking social networks would not resolve Iran's problems in the long term. Shohani believes all websites and services should be made available until they threaten national and social security in Iran. (Source)

- **June 17:** SCC member Alireza Shahmirzae claimed that the SCC has not yet made a decision about the blocking of WhatsApp, claiming that President Hassan Rouhani was not responsible for vetoing CDICC's order to block WhatsApp. On 4 May 2014, Vaezi claimed that the blocking of WhatsApp was suspended by President Rouhani. (Source)

- **June 18:** A member of CDICC said that the Filtering Committee has no current plans to block social mobile apps such as WhatsApp and Instagram. According to the unnamed member, the committee voted against blocking WhatsApp in its most recent meeting. (Source)

- **June 22:** According to Gholamreza Jalali, Head of Iran's Passive Defense Organisation (IPDO), Iran was targeted by around 50,000 cyber attacks in the last year, and all Iranian banks (except Bank Melli Iran) and Iranian email services were found to be vulnerable to Heartbleed. Jalali did not mention name of the email services affected. (Source)

- **June 23:** Mohammad Reza Khabaz, President Rouhani's Deputy Parliamentary Representative, claimed that the biased coverage offered by Islamic Republic of Iran Broadcasting (IRIB) is one of the reasons Iranians would like to join social networks such as Facebook. According to Khabaz, IRIB has not provided impartial news coverage, prompting Iranians to try to satiate their demand for news through other sources such as Facebook. (Source)

- **June 25:** Vaezi announced the national bandwidth has been increased from 500 Gbps to 1200 Gbps and that SHOMA implementation will be expanded over the next few months. (Source)

- Ali Jannati, Minister of Culture and Islamic Guidance, noted that all Iranian authorities agree with the general Internet censorship policy but there are arguments about details. For instance, some authorities favour a block on Viber while others disagree. In addition, Jannati said that social networks provide a good opportunity for Iran to promote its ideology around the world. (Source)

- **June 26:** A US court ordered the Internet Corporation for Assigned Names and Numbers (ICANN) to pass ownership of top-level domain (TLD) names to a group of American victims of terror and their family members. According to the news, .ir, .نا.ای and all Internet Protocol (IP) addresses which relate to the Iranian government and its agencies should be passed to the control of the victims and their families. This news created a buzz in the Iranian media, but the order is ultimately unworkable. (Source)

- **June 27:** Vaezi admitted that the unblocking of Facebook and Twitter is not possible in the short term and will take more time to implement successfully. In addition, he announced that there are 2 million people who have been making use of broadband internet connections, whilst 6,000 minor villages have been granted access to high speed Internet connections. It is the first time that a member of Rouhani's cabinet has conceded that the unblocking of social networks is impossible. (Source)

- **June 28:** Mohammad Reza Norouzi, Director of Data Network at the Telecommunication Company of Iran TCI, said the international bandwidth in Iran will be expanded to 190 Gbps by the end of the summer. The current international bandwidth in Iran is 150 Gbps. (Source)

• **June 30:** Alireza Saleh, Director of NIC.ir, reacted to the June 26 court order against ICANN stating that he doubts the feasibility of transferring ownership of TLD names to US terror victims. According to Saleh, Iran will follow-up on the news, although he believed it was just meaningless propaganda against Iran. More than 500,000 Iranian domains have been registered, with around 90% owned by individuals and organisations in the private sector. ([Source](#))

• Hojatoleslam Hamid Shahriari, the IT and Statistics Deputy for Iran's Judiciary said that there is no disagreement between the judiciary and the government on the issue of internet censorship. According to Shahriari, Internet censorship has been implemented on a legal basis, and as a result, only judges have the power to order the imposition of a block on a website or service. Contrary to this claim, there are a variety of different organisations which claim such internet censorship powers, including the CDICC, FATA, and Iranian Revolutionary Guard Corps (IRGC). ([Source](#))

## CIVIL SOCIETY, PROFESSIONAL ORGANIZATION STATEMENTS

• **June 7:** [Donya-e-Eqtasad](#) published a report about popular laptop brands in Iran. According to the report, the four most popular brands are Asus, Acer, Dell and IBM. Additionally, 14-15” laptops are the most popular amongst Iranian consumers. ([Source](#))

• **June 9:** Behrouz Minae, Technical Deputy of the Supreme Council of ICT (SCICT), announced that Iran has exported six computer games into the international market. The names and genres of these games is unclear. ([Source](#))

• **June 15:** Mohammad Taghi Roghaniha, Editor in Chief of Iran Newspaper, said that current internet censorship policies have been ineffective, citing the number of Iranian users on social networks as evidence. Roghaniha believes that the filtering policy has been stifled by internal political conflicts, which have brought about the current predicament. ([Source](#))

• **June 23:** [The National Internet Development Management Center \(MATMA\)](#) published data on the Iran’s internet penetration rates for the past Iranian year. According to MATMA, the national internet penetration rate was 49.13%, with Mazandaran, Tehran and Isfahan provinces maintaining the highest Internet penetration rates in the country. The latest MATMA figures are listed in [Table 1], [2] and [3] below. ([Source I](#), [Source II](#))

<b>PROVINCE</b>	<b>PENETRATION RATE (%)</b>
Mazandaran	86.77
Tehran	68.04
Isfahan	59.32
Khuzestan	56.28
Semnan	53.80
Qom	51.01
Fars	50.50
Ardabil	49.22
Yazd	48.56
Golestan	46.55
Hormozgan	43.88
Bushehr	42.92
Zanjan	41.97
Markazi	41.85
Alborz	41.80
Kurdistan	41.67
Qazvin	41.44
Hamedan	40.99
Azerbaijan, East	40.37
Khorasan, Razavi	40.27
Azerbaijan, West	39.43
Chahar Mahaal and Bakhtiari	39.18
Gilan	38.73
Kohgiluyeh and Boyer-Ahmad	36.31
Khorasan, South	34.72
Ilam	34.63
Kermanshah	33.18
Sistan and Baluchistan	32.38
Kerman	32.01
Lorestan	31.35
Khorasan, North	27.55

[Table 1] - Internet Penetration Rate, by province

CONNECTION TYPE	PENETRATION RATE (%)	NUMBER OF USERS	NUMBER OF CONNECTIONS
ADSL	15.96	11,991,233	4,796,493
Dial-up	9.23	6,934,760	3,467,380
WiMAX	3.57	2,679,550	1,071,820
Fiber Optic	8.13	6,106,000	2,656,000
Mobile Broadband	12.25	9,207,252	-

[Table 2] - Internet Penetration Rate, by connection type

TOP PROVINCE FOR...	NAME OF PROVINCE (PENETRATION RATE %)
ADSL	Mazandaran (51.00)
Dial-up	Isfahan (13.00)
WiMAX	Khuzestan (10.39)
Fiber Optic	Bushehr (9.20)
Mobile Broadband	Tehran (20.89)

[Table 3] - Internet Penetration Rate, Top Provinces

• **June 25:** Mehdi Rahmani, Editor in Chief of the newspaper *Shargh*, noted that internet filtering systems are hardly functional, as almost all Iranian users are able to bypass them. Rahmani believes that internet censorship offers no benefits, and inflicts only costs to Iran. *Shargh* has an active [Twitter account](#). (Source)

• **June 27:** Akamai published a report about the state of the Internet during Q1 2014. The report found that the average peak mobile connection speed was 5.0 Mbps in Iran and that the country had the lowest average peak connection speed globally, at 6.0 Mbps. (Source)

## UNCONFIRMED REPORTS

- Our sources in Iran suggest that state authorities are continuing to discuss the possibility of imposing a block on the circumvention tool Psiphon
- The TCI has bought a series of new devices that will enable it to implement the Iran's new 'intelligent filtering' system. It is so far unclear which organisations or governments sold these devices to Iran, although our sources in Iran highlight China as a possible source.