



TUNKU ABDUL RAHMAN UNIVERSITY COLLEGE

FACULTY OF COMPUTING AND INFORMATION TECHNOLOGY

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Assignment Final Report Assessment Criteria

The assessment of this final assignment report is based on the following criteria:

Assessment Criteria

Criteria	Excellent	Good	Average	Poor	Score
Part A Background (4%)	Very clear description about the background of the contemporary topic selected. (4%)	Some part of description about the background of the contemporary topic selected with ambiguity. (3%)	Brief description about the background of the contemporary topic selected, which are not directly related to question. (2%)	Very brief description about the background of the contemporary topic selected, which are not related to question. (0-1%)	
Part B Topic analysis and exploration. (30%)	Able to provide very clear and reasonable assessment & justification with very details explanations on the chosen topic from social, legal, architecture and market perspectives. Able to look for relevant information from many sources within the duration of time given and well utilize it. (24-30%)	Good to provide reasonable assessment & justification on the chosen topic from social, legal, architecture and market perspectives. However, some explanations are not clear. Able to look for relevant information from many sources but some information is not used wisely. (15-23%)	Average to provide reasonable assessment & justification with limited explanation on the chosen topic from social, legal, architecture and market perspectives. Able to look for information from many sources but some of them are irrelevant. (8-14%)	Poor to provide reasonable assessment & justification with very little to no explanation at all on the chosen topic from social, legal, architecture and market perspectives. Able to look for limited information and subject to limited few sources and some information are irrelevant. (1-7%)	
Part C Proposed solution(s) for your chosen topic. (20%)	Able to provide very clear and reasonable evaluation with very detailed explanations on the proposed solution(s) for your chosen topic. Able to apply the new ideas and thoughts in solutions and able to apply it for autonomous learning. (16-20%)	Good to provide reasonable evaluation on the proposed solution(s) for your chosen topic. However, some explanations are not clear. Able to apply new ideas or thoughts in solutions in most situations and able to use them without assistance. (11-15%)	Average to provide reasonable evaluation with limited explanation on the proposed solution(s) for your chosen topic. Able to apply new ideas or thoughts in solutions under certain situations and can only use them with some assistance. (6-10%)	Poor to provide reasonable evaluation with very little to no explanation at all on the proposed solution(s) for your chosen topic. Unable to receive & apply new ideas or thoughts on solution. (1-5%)	

Summary (6%)	Able to provide very clear summary on the topic chosen. (6%)	Good to provide summary on the topic chosen. (4-5%)	Average to provide summary on the topic chosen. (2-3%)	Poor to provide summary on the topic chosen. (1%)	
Sub-Total (60%)					

Criteria	Excellent	Good	Average	Poor	Score
Part D Ethical evaluation (40%)	Able to provide very clear and reasonable assessment of ethical issues raised from chosen topic. Excellent justification on such ethical issues with well appropriate selection of the ethics philosophy to support it. Able to give excellent interpretations and consider numerous views from related perspectives based on facts, rules and laws that are relevant to the ethical problem. (31-40%)	Able to provide clear and reasonable assessment of ethical issues raised from chosen topic. Good justification on such ethical issues with well appropriate selection of the ethics philosophy to support it. However, some explanations are not clear. Able to verify whether the facts are relevant or not based on facts, rules and laws relevant to the ethical problem. (21-30%)	Average to provide clear and reasonable assessment of ethical issues raised from chosen topic. Average justification on such ethical issues with limited point to support it. Able to gather facts related to ethics problem but some of it being irrelevant. (11-20%)	Poor to provide clear and reasonable assessment of ethical issues raised from chosen topic. Poor justification on such ethical issues with very limited or no point to support it. (1-10%)	

TOTAL MARK: /100

Lecturer/Tutor's Feedbacks/Comments:



Faculty of Computing and Information Technology

Plagiarism Statement

Read, complete, and sign this statement to be submitted with the written report.

I confirm that the submitted work are all our own work and are in our own words.

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Table of Contents

1.0 Background	6
2.0 Topic Analysis	7
2.1 Market Perspective	7
2.2 Social Perspective	8
2.3 Architecture Perspective	9
2.4 Legal Perspective	10
3.0 Solutions	11
3.1 Market Perspective	11
3.2 Social Perspective	11
3.3 Architecture Perspective	12
3.4 Legal Perspective	12
4.0 Ethical Evaluation	13
4.1 Ethical Egoism	13
4.2 Rule Utilitarianism	13
4.3 Kantianism	14
4.4 Social Contract Theory	15
4.5 Act Utilitarianism	15
5.0 Summary	16
6.0 References	17

1.0 Background

Internet censorship is the practice of restricting online content creation, distribution, and access (Phipps 2020). It is notoriously known globally that political censorship seeps into layers of China's Internet infrastructure. The Ministry of Information Industry (MII) of the People's Republic of China (PRC) is in charge of China's Internet censorship (Human Rights Watch n.d.). It became even stronger under the leadership of President Xi Jinping who aims to strengthen the Communist Party's hold on society through the Internet. This led to the emergence of companies that specifically monitor and delete online content that are deemed in breach of the law.

Stakeholder is a party that has an interest in an organization and can either affect or be affected by it. The stakeholders involved in the Internet censorship in China are foreign websites such as Google, Facebook, Twitter among others. Besides that, the local Chinese citizens are denied the information the government hides from them. The Chinese government is also negatively impacting their reputation and impression before their citizens due to the relationship with the US government (Amatya n.d.).

2.0 Topic Analysis

2.1 Market Perspective

With censorship policies, the impact of market forces is incontrovertibly huge. **Foreign technology firms are finding it increasingly difficult to compete in China**, since the country has blocked an abundance of websites, including social media platforms such as Google services. Besides, China issued new cybersecurity regulations that would force technology firms to submit source code, undergo rigorous inspections, and adopt Chinese encryption algorithms (Xu and Albert 2017). Consequently, internet firms that do not want to jeopardise their market position would have to be given due consideration by playing the rules set by the state. Secondly, **local Chinese companies** such as Tencent and Alibaba, which are among the world's top internet companies, have **benefited from the way China has banned overseas competitors from entering the domestic market** (Gracie 2014). It is believed that China's internet censorship of foreign websites may be a strategy to force mainland Chinese users to rely on China's own e-commerce business, thereby self-insulating their economy (Tom 2008). Thirdly, the actions undertaken by China in internet censorship are clearly **insidious and counter to the necessary conditions of a fair global economic system** (Andrea 2020). A French's magazine was warning companies about the risks of trading with China, stated that the free flow of information online is critical to long-term economic growth and the establishment of solid trade relations with other countries (IFEX 2007). It was inapplicable to evaluate an investment opportunity if there is no accurate information available regarding social conflict, corruption, or local trade unions.

Thoughts and Opinion

In my opinion, we can tell that the Chinese government is attempting to implement a more proactive Internet policy, thereafter providing itself with better instruments by influencing market activities in cyberspace. Although the Chinese market may seem elusive, it remains a lucrative market for many foreign investors, especially given China's stable political environment and large population base. Economic considerations play an important role in the decision-making process of foreign investors than Internet censorship.

2.2 Social Perspective

Internet censorship laws in China have **resulted in a culture of self-censorship** (Zhong et al. 2017). Self-restriction in online expression results from vague and arbitrary enforcement of laws, leading to cases like Australian university students who defy or criticize the Chinese Communist Party (CCP) being harassed and intimidated. Pro-democracy Chinese or Hong Kong students self-censored to avoid harassment, threats and surveillance. Another effect stemming from internet censorship of sensitive political issues have **transformed the internet from an “information superhighway” to an “entertainment superhighway”**, where the entertainment potential of the internet is emphasised over information and political uses of the internet (Guo et al. 2005). The internet is used mostly for entertainment purposes, and whatever political discussion is small, localised and consumerist in orientation, like demanding safer houses and faster transportation rather than challenging the CCP. **The pervasive internet censorship has also created an internet subculture, “social change memes”** (Mina 2014). Memes are a form of media that are constantly remixed and shared, and this allows it to spread even within a censored and propagandized state. Because of the meme culture’s visual aspects and usually hidden and coded meanings, it can slip through the government’s various censorship. An example of this includes the use of the term cǎonǐmǎ (草泥马)(grass horse mud) to mean cǎonǐmā (操你妈)(fuck your mother).

Thoughts and Opinion

The censorship of the internet has a great societal impact on China’s population, leading to a very stunted view of politics among citizens and leaving very few and curated freedom of expression. This stifles innovation and causes political stagnation, harming the wellbeing of the people and preventing them from expressing their political and societal grievances. In my opinion this will in the long term create a digital and cultural divide between Chinese citizens and the outside world, allowing China to increasingly cement its rule over their citizens.

2.3 Architecture Perspective

The Chinese government has been employing **internet filters**, which are software to block online information it deems sensitive or inappropriate (Durkin 2020). The Chinese government **built a firewall with assistance from the hardware vendor Cisco**. This allows the whole country's internet to evolve into a huge intranet. Since 2005, China's telecommunications companies such as China Telecom and China Mobile have been requested by the Chinese government to **install Cisco's networking equipment such as routers** to enhance the censorship. Other companies that provide filtering software to China include Sun Microsystems and Websense, which are U.S. companies (Lee and Liu 2012). The US Trade Representative's 2019 Report to Congress on China's WTO Compliance stated that China currently **blocks more than 10,000 sites which includes Google, YouTube, Facebook, Twitter, Instagram and Dropbox** (United States Trade Representative 2020). Furthermore, business companies are also **restricted to using only cloud storage services approved by the Chinese government**. Foreign services for Internet-based calls, videoconferencing, data processing and virtual private network (VPN) are either prohibited or strictly licensed (Durkin 2020).

Thoughts and Opinion

The censorship in China has greatly impacted the country's Internet architecture. The Chinese government intervened in the design of the Internet architecture to regulate the Internet in such a way that only information deemed "appropriate" can be accessed by its citizens. An architecture-based regulation is not as transparent as the law because Chinese citizens do not know what are the boundaries to freedom of expression on the Internet. While the primary responsibility for protecting the freedom of expression rests with governments, software and hardware companies should also be responsible with their influences on Internet architectures which directly impacts the freedom of expression on the Internet.

2.4 Legal Perspective

The most important regulation issued is the Temporary Regulation for the Management of Computer Information Network International Connection issued in 1993. Based on this regulation, China **takes on the overall planning, uniform standard, stratified management and advanced development of the Internet**. Any Internet access will need to go through China's four major networks including ChinaNet or CSTNet. No one is allowed to set up direct international connections on their own. An individual will need a license to provide Internet access to users and registration is required in order for users to gain access (Qiu 1999).

Another regulation is the Ordinance for Security Protection of Computer Information Systems passed in 1994. It emphasizes that the Ministry of Public Security has the duty of Internet security protection, which indicates that they will **perform supervising work on security protection work and investigate any illegal criminal cases**. The Ministry of Public Security has since set up a computer investigation unit which by July 1998 has handled more than a hundred cases of computer crime (Qiu 1999).

Thoughts and opinion

In my opinion, China's effort to have absolute control over the country's Internet is violating the human rights of the people. The right to information and freedom of expression are not something Chinese citizens enjoy, even though the government claims the opposite. Chinese citizens are at risk of being detained or imprisoned for a few years if one is allegedly found to access, share or spread rumours about politics, religious or other restricted content. This may not have any positive impact on the people's nationalistic sentiment especially for online youths who are more exposed to the spread of discussion about culture and technology in recent years.

3.0 Solutions

3.1 Market Perspective

Since the 2017 Cybersecurity Law, Beijing has put pressure on foreign firms to follow the rules and regulations, which included a provision calling for enterprises to retain their data on Chinese territory (Wei 2021). Many countries are wrestling with how to regulate digital records. It is undeniable that China places a greater emphasis on digital control where all enterprises must strictly comply with China's internet policies. Therefore, **corporations must set up special monitoring and filtration software to ensure that they do not get into trouble with their business and market activities**. For example, an Amazon China partner had monitored their client and told them to stop using illegal virtual private networks (VPNs), which can circumvent internet censorship (Reuters 2017). All services will be shut down if illegal cross-border businesses are discovered. Moreover, Apple officially opened a new data center in China partnering with local partner Guizhou Cloud to deliver iCloud to local customers recently (Swinhoe 2021). Foreign-owned enterprises can then **use the internet service provided by these local service providers** to run their online businesses successfully, keep web traffic local, and house all content within mainland China. As such, it helps companies to stay online in China, and perfect their Internet presence to tap into the country's market.

3.2 Social Perspective

From a social perspective, in order to solve the problem of internet censorship in China, citizens should make **concerted and organised efforts to protest, bypass and bring attention to censorship in China**. Activism organisations and individuals in China could and have launched activism and petitions for foreign governments to put pressure towards China's government targeting the Great Firewall (GFW) such as the petition circulating on the U/S. White House's petition website "We the People" to deny visas to the developers of China's Golden Shield Project (Global Times 2013). Through **creative cultural tactics like code words, memes and images can further allow the bypass of internet censorship infrastructure and allow for free discussion** to mitigate the effects of censorship somewhat (Yang, 2014), and create tangible social and governmental changes. On several occasions, **collective action and public sentiment** have resulted in legislative changes and the downfall of high-ranking government officials (Yang 2013).

3.3 Architecture Perspective

The simplest solution for bypassing internet censorship in China is by using **VPNs**. VPNs allow Chinese citizens to **establish secure connections from their smartphones or computers to remote VPN servers in other countries before entering the public internet**. VPNs hide their real IP address and encrypt their connections. Although the Chinese government has taken some measures to block the use of VPNs, it is impossible for them to take blanket action against every VPN. This is due to the fact that **many foreign companies in China use VPNs for their internal company communications** (Deutsche Welle 2021). Besides VPNs, another solution to bypass the internet censorship is by using **proxies** such as **Shadowsocks**. Shadowsocks is similar to VPNs except users can **configure their proxy connections, so that every user is not using the same protocol**. This makes it more difficult for the authorities to detect the proxy connections (Horwitz, J and Sonnad, N 2019). In addition, **Tor browser** can also be used to bypass internet censorship in China. Tor browser **directs traffic through multiple servers that are constantly changing** (Sapore di Cina 2019). Furthermore, it uses pluggable transport protocols such as ScrambleSuit and obfs4 which are specifically designed to protect users against the firewall's active probing attacks (The Tor Project 2014). Therefore, it is even more difficult for the Chinese authorities to trace the origins of the connections.

3.4 Legal Perspective

From a legal perspective, the solution to China's censorship problem is **having foreign influence to negotiate with China about their censorship policies**. China's censorship problem is no longer just a China problem, it has affected the global economy due to China's immense restrictions on the Internet. According to the U.S. Trade Representative's 2019 Report to Congress on China's WTO Compliance, China has blocked more than 10,000 sites including YouTube and Facebook which caused a loss of billions in business (Durkin 2020). The World Trade Organization can negotiate with China to loosen their censorship on foreign products or services such as not banning these products or services and instead only let them remove specific content. Also, the Chinese government should **make their guidelines about illegal content clear and transparent**. This is because foreign companies that want to access the Chinese market can better understand the basis and their limitations so they would not violate any regulations that they are unaware of.

4.0 Ethical Evaluation

4.1 Ethical Egoism

As the Chinese government seeks to establish its own internet industry, it engages in ethical egoism. They act morally right because it provides themselves with **maximum long-term benefit**. The Chinese government has endeavoured to build an Internet with **positive externalities** in terms of business and economic development, education, and information exchange (Lee and Liu 2012). China's "Great Firewall" responds to threats to its own claim to power including website blocking and keyword filtering, censoring social media, and arresting content posters who broach sensitive or political issues (Investopedia 2019). This has **kept foreign internet companies at bay, allowing domestic ones to thrive**. For example, Chinese apps Tiktok, Tencent Video, iQiyi had become the world's top-earning apps in the first half of 2021 and enjoyed considerable success abroad (Tracy 2021). Subsequently, Google, Apple and Microsoft all have voluntarily censored content for Chinese markets in order to maintain good government relations and their business operations in the country (Rebecca 2009). This has **benefited China's economic development, as well as its political rise and global power** by implementing the media censorship policies and banning other global social media providers such as Facebook and Twitter. The Chinese government monitors Internet content and restricts, deletes, or prohibits content that is considered harmful to the state's interest. China's goal is to achieve **pro-China media coverage and policy in foreign countries** (Annegret 2019), thus it vigorously defends its power and interests via internet censorship. It is in their own **self-interest that the Chinese government offers more business opportunities and special incentives** to Chinese citizens for the development of their own social media platforms and applications.

4.2 Rule Utilitarianism

Seen through the lens of rule utilitarianism, the actions and laws of the Chinese government in censoring the internet is ethical if it **brings the most benefit and happiness to society when implemented as a moral rule**. If for example, censorship of the internet is carried out and successfully **reduces the spread of harmful ideology, violence and social issues** in line with one of the given reasons for censorship (Protalinski 2012), it can be seen as a net benefit to society as whole and is therefore ethical. This is untrue in most cases however, as only Conflict Internet Censorship has shown to reduce crime in specific circumstances, while all other types of censorships have no effect (Karnadi 2015). However, if the censorship of the internet results in political repression, whereby the people do not have an outlet to vent their frustrations, or to create societal changes to maximize the benefits of society, then it is an unethical action as it brings a net harm to society. This **infringes upon freedom of speech**, as the form of censorship not only censors what is classically considered "immoral" content, but also political, sensitive and personal freedom of speech. Freedom of speech has shown to be correlated with happiness, the freer the nation, the happier the people (IREF Europe 2018). Thus, the particular form of internet censorship in China infringes upon freedom of speech, and therefore reduces the happiness of the people of China. Therefore, in consideration of all the effects of internet censorship in China, it can be seen as an **unethical action, stemming from rules which are not ethical and do not increase happiness from the lens of rule utilitarianism**.

4.3 Kantianism

Cisco sells hardware especially routers to the Chinese government which were initially necessary for the internet censorship to work (Lum 2006). In 2008, an internal document of Cisco was leaked revealing that **Cisco knew exactly the motives behind the "Golden Shield" program and viewed it as a great business opportunity** (Stirland 2008). To evaluate from the Kantian perspective on whether the action of Cisco supporting the Chinese government in the internet censorship is ethical or not, Kantianism's universalizability test can be used. In this case, the proposed rule would be **"A hardware company should supply its products to a government to censor content that are deemed as sensitive or inappropriate by the government"**. If this rule is universalized, all companies would cooperate with any governments in internet censorship programs that **allow governments to dictate which information should be accessible by their citizens** and which are not. Clearly, the universalized rule is **flawed because the "sensitiveness" and "appropriateness" of information is subjective and vague**. As the internet censorship technology becomes increasingly sophisticated, all governments including those with unethical motives would have full control over the internet and be able to block any information that is detrimental to their reputation. As a result, **the suppression of the rights of freedom of speech and information would go unchallenged**. This **defeats the purpose of the internet** to provide global sharing and access to information. Therefore, the action of Cisco is viewed as **unethical** under the Kantian theory.

4.4 Social Contract Theory

The Chinese government has asserted that they have the **legal right to censor content on the Internet within their territory** and Chinese citizens have to **implicitly agree to this social contract** to ensure political order within the country. Based on Social Contract Theory, the government is capable of enforcing these rules (McCartney and Parent 2021) and no one is allowed to go against the rules (Bertram 2010). As a result, the citizens have to give up their freedom of speech and expression on the Internet to **avoid legal actions taken by the government**. However, the Social Contract Theory may not be perfect since it **offers the government an excessive amount of power to form laws underneath the mask of protecting the public**. Specifically, governments could use the cloak of the accord to invoke the concern of a state of nature to warrant laws that are intrusive. Under the guise of protecting the citizens from foreign influence, the position of the Chinese Communist Party who is currently ruling the country will be threatened if no censorship rules are enforced as this can possibly propagate campaigns that could lead to protest against the government (Datt and Cook 2021). The Chinese people may **feel unjust because of the restrictions of their rights to information online**. This can be seen in the beginning of the COVID-19 outbreak, where questions of transparency about the outbreak became especially sensitive and concerns about the coronavirus exploded with the intensive tightening of Internet censorship in China to cover up any content that they deem unhelpful (Reuters 2020). Even though Internet censorship sparks frustration among the people, it is still considered as ethical under Social Contract Theory to prevent serious consequences on Chinese society.

4.5 Act Utilitarianism

The principle of act utilitarianism dictates that **any action performed must create the greatest net utility**. Therefore, if higher utility is yielded from the censorship of the internet by the government of China, then the action is deemed ethical. A 2017 research has found that **more than half of the participants interviewed avoided identifying censorship as entirely evil and repressive because they realise the value in the restraints the censorship imposes**. They were concerned about the dangers of unrestricted information flow, namely rumours that could potentially cause panic and unrest among Chinese citizens. The participants also acknowledged the **utilitarian value of digital technologies in facilitating expression but were concerned about the misuse of these technologies** (Kou, Semaan & Nardi 2017). For example, there were widespread rumors about the mystical powers of salt in protecting against radiation following Japan's Fukushima Daiichi nuclear disaster in 2011. However, with China being an authoritarian country, rumors turn out to be true in some cases and serve as a tool to protest against unreliable official statements (Hu 2009). In response to that, the Chinese government executed various strategies to control controversial information that challenged the authoritative power. As a result, the citizens of China will be ignorant of the truth and those who are aware of it will not have their dissenting voices heard (Creemers 2017). Therefore, in consideration of the consequences of internet censorship in China, it would be **deemed ethical in this case because the benefits of the removal of false rumors that negatively impact citizens' lives outweighs the cons of censorship which is the citizens not being able to realise the truth behind the rumors**. However, the ethics of internet censorship based on Act Utilitarianism have to be based on a case-to-case basis.

5.0 Summary

We presented a comprehensive study on the censorship of the Internet in China. To this end, we researched the background of Internet censorship in China including the various methods deployed to execute the censorship of the Internet. In addition to that, we also identified all of the general stakeholders such as foreign websites, local Chinese citizens and government. Furthermore, we performed a topic analysis through various perspectives such as market, social, legal and architecture which we have evaluated and state our viewpoints on the respective perspectives. Then, we proposed solutions for all of the topics and provided justifications for each of them. Last but not least, we have performed ethical evaluation on the actions of stakeholders in the topics through different ethics philosophies such as ethical egoism, rule utilitarianism, and more. Therefore we hope that this paper can shed more light on this topic and its effects, solutions and ethics through rigorous research performed.

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