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**The American University in Cairo**  
**School of Global Affairs and Public Policy**

**NET NEUTRALITY AND CONSUMER WELFARE: DIVERGENT APPROACHES  
TO EGYPTIAN TELECOMMUNICATION REGULATION**

**A Thesis Submitted to the**  
**Department of Law**  
**in partial fulfillment of the requirements for the LL.M. Degree in International and**  
**Comparative Law**

**By**

**Menna-tullah Helmy Hamada**

**January 2020**

The American University in Cairo  
School of Global Affairs and Public Policy  
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in partial fulfillment of the requirements for the  
LL.M. Degree in International and Comparative Law  
has been approved by the committee composed of

Professor Hani Sayed

Thesis Supervisor  
American University in Cairo  
Date \_\_\_\_\_

Professor Dalia Ali

Thesis First Reader  
American University in Cairo  
Date \_\_\_\_\_

Professor Thomas Skouteris

Thesis Second Reader \_\_\_\_\_  
American University in Cairo \_\_\_\_\_  
Date \_\_\_\_\_

Professor Thomas Skouteris

Law Department Chair \_\_\_\_\_  
Date \_\_\_\_\_

Ambassador Nabil Fahmy

Dean of GAPP \_\_\_\_\_  
Date \_\_\_\_\_

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School of Global Affairs and Public Policy  
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Supervised by Professor Hani Sayed

ABSTRACT

This paper explores the implications of the debate on net neutrality on telecommunication policy in Egypt. I argue that consumer welfare should be the main determining factor of the effects of net neutrality obligations on the telecom sector. Consumer welfare must remain the focus of any regulator while applying net neutrality obligations. Consumers in any telecom market care about three elements, namely, prices, quality and speed of the internet, and openness and accessibility of the content available over the internet. Meanwhile, the main controllers of the telecom market are torn between preserving the nature of the internet and their own best interests. Since, the Egyptian telecom market has its unique structure and main key players, this paper proposes an implementation strategy for net neutrality obligations to be met in the Egyptian market for the consumers best interests.

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## Introduction

In September 2013, Vodafone Netherlands made a simple offer to its subscribers called HBO GO. This offer allowed subscribers to enjoy the use of the HBO GO application free of charge for a period of 90 days.<sup>1</sup> During this period subscribers could use the HBO GO application to watch television series, movies and documentaries on any three devices of their choice. Furthermore, the use of this application would not consume nor be charged to the mobile data package of the subscriber. The content available on the application was also free of charge.

In September and November 2017, Vodafone UK released two marketing offers to its subscribers, namely, Voxi and Passes. The prior one offered subscribers over the age of 25 free access to certain social media and messaging applications of the subscribers' choice. While the subsequent one offered all subscribers the choice of selecting five applications one from each category; namely: chat, social media, music and video and a fifth application from any of the four categories.<sup>2</sup>

By comparing the offers made by Vodafone Netherlands and Vodafone UK, there might not seem to be a problem, or even a legal difference between the offers provided. They may appear to be simply common marketing offers provided by Internet Service Providers (ISPs) to their consumers. Hence, from a legal perspective, they might seem to constitute a legal arrangement between Vodafone and its subscribers that choose those packages over a variety of packages offered by Vodafone whether in the UK or in the Netherlands. However, in reality this is not the case. In August 2014, Vodafone Netherlands HBO GO offer incurred a fine of EUR 200,000 for the breach of its net neutrality obligations.<sup>3</sup> Furthermore, Vodafone UK is currently under investigation by the Office of Communications (Ofcom), the communications' regulator of the UK, for a

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<sup>1</sup> Netherlands Authority Decision, case number 14.0876.31 of 18 December 2014.

<sup>2</sup> See, Ofcom, monitoring compliance with the EU Net Neutrality regulation, a report to the European Commission, 29 June 2018.

<sup>3</sup> Netherlands Authority Decision, *supra* note 1.



suspected infringement of Open Internet regulations with regards to VOXI and Passes offers.<sup>4</sup>

Similar marketing strategies are being used every day worldwide by Telecom service providers. This resulted in debates around whether such offers benefit consumer welfare or not. In addition, the future impact of similar marketing campaigns on the initial nature of the internet, which is openness and accessibility. Internet has become significant and extremely popular during the past decade due to the fact that it was so open and accessible to anyone that has a connection and a compatible device. Thus, the attention of world leaders in the telecom sector has been focused on these so called net neutrality obligations.

The term “Net Neutrality” was first coined by Tim Wu in his paper *NETWORK NEUTRALITY, BROADBAND DISCRIMINATION*, in 2003.<sup>5</sup> Tim Wu is a lawyer, a professor at Columbia Law School and a contributing writer for New York Times, who is best known in developing the theory of Net Neutrality.<sup>6</sup> Net Neutrality (also known as “Network Neutrality” or “Open Internet”) is basically the idea that ISPs should not, by any means, have control over the data packets travelling through its network and that Content Providers (“CPs”) should not pay the ISPs to deliver their traffic to consumers.<sup>7</sup> Net Neutrality is also based on the idea that all lawful content should be equally treated. However, ISPs can only be in control of the speed in which the data traffic flows subject to the local laws and regulations, thus, in practice speed is not even controlled by ISPs. According to net neutrality regulations, ISPs are also only allowed to practice “reasonable management control” over their networks. Such management control is subject to certain restrictions such as no blocking of lawful content, no throttling and no data discrimination, of any sort.

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<sup>4</sup> See, Ofcom, *supra* note 2.

<sup>5</sup> See, Tim Wu, *Network Neutrality, Broadband Discrimination*, 2, JOURNAL OF TELECOMMUNICATIONS AND HIGH TECHNOLOGY LAW, 141 (2003).

<sup>6</sup> See, *Id.*

<sup>7</sup> See, Peitz, Martin, & Florian Schuett, *Net Neutrality and Inflation of Traffic*, 46, INTERNATIONAL JOURNAL OF INDUSTRIAL ORGANIZATION, 17, (2016).

As an Egyptian telecom lawyer and a heavy internet user, I remain fascinated by this debate, for its potential effects on both my personal and professional lives. Net neutrality is a highly debated topic in developed countries (e.g. USA and Europe) but less so in Egypt. Egypt is not a market where giant CPs will pay attention to. This explains the reason the market has been comparatively silent with regards to this topic. This paper draws upon the importance of introducing net neutrality obligations in the Egyptian telecom regulations and the manner with which those obligations should best be applied. In this paper consumer welfare is the only constant and main focus. Since, Egypt is a market where new ideas and innovations take place, it is important to assure that telecom regulation in Egypt provides a safe environment for such start-ups to become one day as popular as Facebook and YouTube for the benefit of consumers in Egypt and consumers worldwide.

In order to establish a regulatory framework for applying net neutrality obligations in Egypt, it is important to analyze the effects of such obligations, in general, on consumers. Consumer welfare in any market is based on multiple factors. Determining the factors affecting consumer welfare is the first step towards achieving consumer satisfaction. Thus, this paper is divided into three chapters. Chapter I explores the necessary technical and historical background to understand the idea of a neutral market. This chapter, highlights the main arguments presented by both parties in the debate: content providers and internet service providers. It mainly argues that, although, the parties base the arguments on consumer welfare, the actual motive behind their argument is protecting their economic interests. Chapter II of this paper, categorize the main factors affecting consumer welfare with regards to the internet market. It suggests that consumer welfare is not only based on prices but also quality of service and the consumer freedom to access content. This chapters, highlights the effects of prices on competition. It argues that low prices, on their own, do not guarantee consumer welfare. In fact, low prices resulting from zero rating and sponsored data plans, vertical integration or bandwidth tiering are highly likely to distort competition and change the nature of the internet that has made it that popular and attractive to consumers to begin with. It further establishes the link between quality of service and consumer freedom to access content. It particularly

stresses that those former factors are inter-reliant; a good quality of service is useless without a variety of content and the freedom to access such content and vice versa. Most importantly, it points out that certain legitimate data traffic control measures, under strict regulations, is essential for ensuring a better quality service. This chapter establishes the threshold between reasonable network management to ensure a better quality of service and the unreasonable data discrimination that would distort competition and establish a barrier to entry for startup content and application providers. Finally, chapter III addresses the implementation of Net Neutrality obligations within the Egyptian Telecom market. This final chapter argues that the regulator in Egypt should focus on establishing a safe environment for start-up CPs to develop their ideas and businesses. Such safe environment would ensure the flourishing of ideas which would benefit the consumers in terms of content and applications availability.

## **I. Exploring the term “Net Neutrality”**

Technical and historical backgrounds are essential to understand how the concept of open internet has become that popular and debatable at the same time. In order to understand the concept behind open internet and the net neutrality obligations, it is important to know how the internet functions.

A useful starting point is providing background on the term net neutrality. This chapter starts with a brief and simplified technical explanation of how individuals daily data traffic travels through the networks of ISPs. Then, it analyzes the recent history of the development of the net neutrality obligations in the United States and Europe. It also gives a brief insight on the nature of the internet; being of a public utility nature of a private property owned and controlled by ISP alone. Finally, this chapter presents the parties of the debate around net neutrality and their arguments. This final section argues that although both parties may base their arguments on consumer welfare, they are, in reality, driven by their own economic interests.

### **A. Transmission of data traffic through the ISP networks**

The internet operates through three key players. They are the Content Providers (CPs), Internet Service Providers (ISPs) and consumers (also referred to as End users). CPs offer the content that individuals access through a network owned and operated by ISPs. Google (YouTube), Facebook, and Netflix are CPs, while, Orange, Vodafone, TE (lately rebranded as WE) and AT & T are ISPs. They are also sometimes referred to as “Internet gatekeepers”.

The internet is composed of many individual networks owned by ISPs and connected mostly by wired and wireless telephone lines through which the data travels: mobile broadband and ADSL. This network can best be described as a road, or a path called ‘bandwidth’. The bandwidth can be pictured as a highway; there are various roads that you can take to reach a certain destination, as well as, there being rush hours and low traffic hours. Bandwidth can only carry a certain capacity of data at a time and at a certain speed. It can also be wired paths like fixed ADSL lines or wireless like mobile

broadband (3G/4G).<sup>8</sup> Originally, the capacity and speed of a bandwidth, as well as the data traffic flow, determine the efficiency, quality of service and consumer experience using the internet. The more capacity available, the higher the speed and less traffic there is, the faster data packets are delivered resulting in less delay, and a better overall consumer experience. The capacity and speed of a bandwidth, of any given network, is determined by local laws and regulations in the territory.

Data travels through bandwidth in so-called, data packets. When you send a file, a video or a picture by email, for example, it gets broken down into small data packets that travel through the network taking various paths. Once these data packets reach their destination they are reassembled, like a puzzle, by your device or computer to reform that file, video or picture.

Data packets can also be classified into two categories: data packets that cannot be delayed and data packets that can afford some delay. The first category of data packets includes ones in which a mild delay could affect the consumer experience on the internet negatively, as live video streaming for example. Live video streaming is based on a faster internet experience, a delay due to excess internet traffic or throttling could result in a video that cuts-off on consumers while playing. Some online games, as well, depend mostly on the delivery of those data packets consistently, as any delay will cause the game to malfunction. This is unlike emails or text messages such as WhatsApp where a few seconds or even a minute delay is unlikely to significantly affect the consumer experience at all.

Net neutrality obligations were introduced to regulate data traffic flow through the network of ISPs. They also control ISPs power to manipulate the market through discriminating between those data packets.

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<sup>8</sup> More basic technical information on how the internet works are available on: <https://www.digitalunite.com/technology-guides/using-internet/connecting-internet/what-bandwidth> [last accessed on Jan. 21, 2020].

## **B. Regulating The Internet and Introducing Net Neutrality Obligations**

“Innovative productive practices in business, government, education, health care and daily life are now critically dependent on the ability to communicate information quickly and inexpensively. With more than two-thirds of adults now on-line in the United States, the Internet is becoming a critical component of society’s communications infrastructure.”<sup>9</sup> Telecommunication infrastructure started worldwide as networks built and operated by telephone companies regulated as a public utility.<sup>10</sup>

Development of the network and introduction of GSM, ADSL and mobile broadband came alongside the era of privatization and liberalization of the telecom industry. Such coincidence caused the debate around whether broadband internet is a public utility or a private property. Fixed telephone services as well as cable TV are considered in most countries a public utility. ADSL, GSM and Mobile broadband are pure developments of the fixed telephone. Accordingly they are, in Egypt for example, perceived as a public utility.

The Egyptian Telecom law regulates all telecom services and telecom operators similarly and under the same regulatory authority. Article 3 thereof states that: A national authority managing the Telecommunication utility shall be established and named “The National Telecommunication Regulatory Authority”. The Authority shall have a public juristic personality; it shall be subordinated to the Minister Concerned and shall have its headquarters in Cairo and Giza. Thus, the law does not differentiate between fixed and broadband services, in fact, all services are under same laws, regulations and the same regulatory authority. Uniting all telecommunication services and classifying them as a public utility, requiring a license from the government to operate and under the strict supervision of the NTRA, limits to a huge extent and controls the ISPs anti-competition practices and any many other practices that may harm consumer welfare. In opposed to

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<sup>9</sup> Sharon E. Gillet, William H. Lehr, Carlos Osorio, *Local government broadband initiatives*, 28., TELECOMMUNICATIONS POLICY, 537, 537 (2004).

<sup>10</sup> See also, *id*, at 539.

taking a deregulatory approach and classifying the internet in Egypt as a privately operated access service, which will harm innovation on the long run.

Furthermore, in 2011, the Egyptian Ministry of Communications and Information Technology (MCIT), through the NTRA, launched eMisr National Broadband Plan. The eMisr National Broadband Plan aimed to increase the broadband penetration throughout Egypt.<sup>11</sup> The Plan, further, stressed on the fact that telecommunication in general in Egypt, including broadband internet, is of a public utility nature. ICT policy report of 2011 states that “Municipal broadband projects are not telecommunications projects; they are community development projects that leverage the power of modern telecommunications technologies, i.e. ICTs, for local and community development. They are developed in recognition of the public utility in enhancing access to ICTs for economic, social and human development.”<sup>12</sup>

In most countries the nature of the service did not change; being of a public utility nature. However, during the 1990s most of the countries either opted to privatize their national fixed telecommunications companies as in Latin America or allow foreign investors to join the market as in Egypt.<sup>13</sup> The new owners, nevertheless, were required to comply with strict requirements for the expansion of the network and quality standards.<sup>14</sup> Privatization of telecom services generally increased prices.<sup>15</sup> However, such privatization came in favor of the consumer as it improves the quality of service significantly.<sup>16</sup> Telecom operators, on the other hand, commonly hope to categorize broadband as a private property to increase their management authority over their networks. However, it remains a gray area for debate.

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<sup>11</sup> Ministry of Telecommunication and Information Technology, *National Broadband Plan*, available at, [http://www.mcit.gov.eg/TeleCommunications/National\\_Broadband\\_Plan\\_eMisr](http://www.mcit.gov.eg/TeleCommunications/National_Broadband_Plan_eMisr) [last accessed on Jan. 21, 2020]

<sup>12</sup> ICT Policy Report 2011. 9

<sup>13</sup> LUIS, A., LUIS, A., & VIVIEN, F. IMPACT OF PRIVATE SECTOR PARTICIPATION IN INFRASTRUCTURE : LIGHTS, SHADOWS, AND THE ROAD AHEAD, 155-156. (2008).

<sup>14</sup> *Id.*, at 156.

<sup>15</sup> *Id.*, at 161.

<sup>16</sup> *See, id.*, at 161.

From 1996 and till 2015 internet was classified as “Information Services” in the USA. Then, in 2015, FCC Title II order reclassified the broadband internet service declaring it of a public utility nature.<sup>17</sup> Such classification survived only for two years. The FCC report and order of Jan. 2018 included the actions taken to “restore Internet Freedom”.<sup>18</sup> The first of such actions was ending “utility-style regulation of the Internet” in order to “preserve the future of Internet freedom”.<sup>19</sup> The 2018 order and report criticized the previous 2015 order reclassification of the internet, calling it a “misguided and legally flawed approach”. The announced reason behind going back to the pervious classification is that “this light-touch information service framework will promote investment and innovation better than applying costly and restrictive laws of a bygone era to broadband Internet access service. Our balanced approach also restores the authority of the nation’s most experienced cop on the privacy beat—the Federal Trade Commission—to police the privacy practices of Internet Service Providers (ISPs).”<sup>20</sup>

Article 20 of the FCC order and report of 2018 states: We reinstate the information service classification of broadband Internet access service, consistent with the Supreme Court’s holding in *Brand X*. Based on the record before us, we conclude that the best reading of the relevant definitional provisions of the Act supports classifying broadband Internet access service as an information service. Having determined that broadband Internet access service, regardless of whether offered using fixed or mobile technologies, is an information service under the Act, we also conclude that as an information service, mobile broadband Internet access service should not be classified as a commercial mobile service or its functional equivalent... The broader Internet ecosystem thrived under the light-touch regulatory treatment of Title I, with massive investment and innovation by both ISPs and edge providers, leading to previously unimagined technological developments and services. We conclude that a return to Title I classification will facilitate critical broadband investment and innovation by removing regulatory uncertainty and lowering compliance costs.

Classifying the internet as a public utility or as an access service privately owned and operated by ISPs directly affects the application of net neutrality obligations. Net

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<sup>17</sup> FCC Report and Order, 2018. 2

<sup>18</sup> *Id.*

<sup>19</sup> *Id.*

<sup>20</sup> *Id.*



neutrality obligations leans more towards applying strict regulations on ISPs to limit any discriminatory practices and preserve the nature of the internet for consumers. Classifying the internet as a private property, on the other hand, will require more lenient regulations where ISPs have more control over their networks. Introducing the open internet notion while attempting to classify the nature of the internet explains the contradicting regulations of the USA in 2015 and 2018.

The idea behind the open internet is relatively new. As previously mentioned, Tim Wu came up with the term ‘network neutrality’ in 2003. The net neutrality obligations were first introduced by a regulator in 2004. Michael Powell, the Chairman of the FCC, highlighted four principles of internet freedom.<sup>21</sup> Powell stated that those principles are: “(1) the “Freedom to Access Content,” (2) the “Freedom to Use Applications,” (3) the “Freedom to Attach Personal Devices,” and (4) the “Freedom to Obtain Service Plan Information.”<sup>22</sup>

The starting point for attempting to develop regulations in support of a free internet was in 2005 when the FCC adopted those principles, highlighted by its chairperson, using a non-binding approach. “To encourage broadband deployment and preserve and promote the open and interconnected nature of the public Internet, consumers are entitled to[:]

- access the lawful Internet content of their choice.
- run applications and use services of their choice, subject to the needs of law enforcement.
- connect their choice of legal devices that do not harm the network.
- competition among network providers, application and service providers, and content providers.”<sup>23</sup>

From 2004 up until today, net neutrality has continued to hold social, political and economic attention around the world particularly in the United States and Europe. On the 29<sup>th</sup> of October 2007, Barack Obama vowed to support net neutrality stressing the importance of its openness:

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<sup>21</sup> Simone A. Friedlander, *Net Neutrality and the Fcc’s 2015 Open Internet Order*, 31, BERKELEY TECHNOLOGY LAW JOURNAL, 915, 2016.

<sup>22</sup> *Id.*, at 915.

<sup>23</sup> *Id.*, at 919.

I am a strong supporter of net neutrality ... What you've been seeing is some lobbying that says that the servers and the various portals through which you're getting information over the Internet should be able to be gatekeepers and to charge different rates to different Web sites ... And that I think destroys one of the best things about the Internet—which is that there is this incredible equality there.<sup>24</sup>

Then, on the 20<sup>th</sup> of December, 2010 the Federal Communication Commission of the USA (FCC) adopted their rules/orders on net neutrality. Such orders signified a turning point in embedding the net neutrality obligations in telecommunication regulations in the US ensuring an open internet. The first article of the FCC order and report of December 2010 stressed the main purpose of the order: is to ensure and preserve the nature of the internet, as a safe platform encouraging innovation, investment and freedom of expression. The article, more or less, echoed the statement of Obama. It articulated the three basic rules upon which the regulation is based namely: (1) “Transparency”, where providers management policies and practices must remain disclosed; (2) “No blocking”, where no lawful content be blocked by any means; and finally (3) “No unreasonable discrimination” which implies not only restricting blocking of lawful content but also restricting slowing down content and speeding up other, or even admitting the access of certain content for free and charging for other, known as data prioritization.

Article 1 of the FCC order report of December 2010: Today the Commission takes an important step to preserve the Internet as an open platform for innovation, investment, job creation, economic growth, competition, and free expression. To provide greater clarity and certainty regarding the continued freedom and openness of the Internet, we adopt three basic rules that are grounded in broadly accepted Internet norms, as well as our own prior decisions:

- i. **Transparency.** Fixed and mobile broadband providers must disclose the network management practices, performance characteristics, and terms and conditions of their broadband services;

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<sup>24</sup> Barack Obama, *The path to a free and open internet, 2007*, available at, <https://obamawhitehouse.archives.gov/net-neutrality> [last accessed on Jan. 21, 2020].

- ii. **No blocking.** Fixed broadband providers may not block lawful content applications, services, or non-harmful devices; mobile broadband providers may not block lawful websites, or block applications that compete with their voice or video telephony services; and
- iii. **No unreasonable discrimination.** Fixed broadband providers may not unreasonably discriminate in transmitting lawful network traffic.

A few weeks after the adoption of the 2010 orders, Verizon Communications filed a federal lawsuit against the FCC which resulted in the striking down of such orders on the 14<sup>th</sup> of January 2014.<sup>25</sup> Since then, net neutrality has remained a subject of debate, petitions and litigations in the US. Even after the court decision, Barack Obama kept stressing the importance of open internet for the development of innovation: “I personally, the position of my administration, as well as a lot of the companies here, is that you don’t want to start getting a differentiation in how accessible the Internet is to different users. You want to leave it open so the next Google and the next Facebook can succeed.” Obama. The FCC, in response to that decision, issued “a notice of proposed rulemaking on internet regulatory structure, opening a period during which the public could submit comments on the rule.”<sup>26</sup> This action received hugely unexpected public participation of nearly 4 million comments “more than the FCC has received on any other issue they've handled.”<sup>27</sup> The public participation was strongly supported and directed, ironically, by the media, more specifically TV shows, such as Last Week Tonight by John Oliver, produced by HBO. This specific episode of the show, where John Oliver asked his viewers to submit their comments, made 14 million views on YouTube.<sup>28</sup> These actions give CPs, such as HBO, an unfair advantage over ISPs in influencing the public opinion, which consequently results in a more powerful impact on the law-making

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<sup>25</sup> See, OBAMA, *id.*

<sup>26</sup> *Id.*

<sup>27</sup> *Id.*

<sup>28</sup> See also, <https://www.youtube.com/watch?v=fpbOEoRrHyU> and <https://www.youtube.com/watch?v=92vuuZt7wak> .

process. The latest regulations that have been issued by the USA with regards to net neutrality were the 2018 Restoring Internet Freedom report and order.<sup>29</sup>

Meanwhile, in Europe, the Body of European Regulators for Electronic Communications (BEREC) adopted its Guidelines on the Implementation by National Regulators of European Net Neutrality Rules in August 2016, which focused on equal and non-discriminatory treatment of data traffic. The BEREC guidelines were objected to by ISPs in various response reports published. In Vodafone's response to Draft GEREK guidelines, Vodafone raised its concern that such regulation "restricts customer choice" and that they hold "back the development of new high quality services".<sup>30</sup> Likewise, Orange expressed that

rapidly growing traffic levels have raised additional concerns about the sustainability of the current Internet business model. The recent years have seen major changes in the Internet ecosystem: a few powerful content and service providers have developed activities which vastly increase traffic on the network (especially video). These actors, or their intermediary international transit players, use more and more network capacity but have no incentive to use it efficiently as they do not contribute to investments required to support the traffic they generate ... Orange believes that the best solution is to request these players to pay a fair share of the variable costs of the Internet asymmetric traffic they send.<sup>31</sup>

Although, the Egyptian regulators has not yet introduced the Net Neutrality principle into its telecommunication regulations, the Egyptian Telecom Law no.10 of 2010 is in fact based on the protection of consumers' rights, free competition and publicity of information. These are specifically stated in article two: "Telecommunication Services shall be in compliance with the following rules: 1. Publicity of information, 2. Protection of free competition, 3. Provision of Universal Services, 4. Protection of Users' rights. All of these shall be as clarified in this Law." Thus, article two of the law elaborates on the basic rules and principles in regulating the telecommunication market in Egypt which are, more or less, similar to the basic net neutrality obligations.

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<sup>29</sup> FCC, *Supra* note 17.

<sup>30</sup> VODAFONE, *In response to BEREC consultation on net neutrality guidelines*, at 2.

<sup>31</sup> ORANGE, *Net Neutrality: Position of Orange Group*, 2014.

The open internet orders and basic net neutrality obligations were supported by CPs but highly opposed to by ISPs. The clashing interests of ISPs and CPs brought up the debate around net neutrality. Both parties had their own arguments and pressure points on the regulator, which are elaborated below.

### **C. The Net Neutrality Debate: the Clashing Interests of Internet Service Providers and Content Providers.**

The main parties of the net neutrality debate are CPs and ISPs. CPs exert efforts to support net neutrality obligations, while ISPs are to the contrary. Ironically, both parties base their argument on consumer welfare.

As discussed before, the net neutrality debate is mostly based on the economic and political interests of the parties. On the one hand, CPs exert their utmost efforts in supporting of the implementation of net neutrality obligations. This is done in particular, to avoid the vertical integration of ISPs into the area of providing content and applications as well as to avoid data discrimination that would result from such vertical integration or through paid prioritization agreements and fast lane access that would incur extra costs on CPs. Although, CPs hide behind consumer welfare to support their arguments their true intentions remain visible:

Those invested in net neutrality for financial reasons include many Internet-based companies such as Google and Netflix. Without network neutrality, these companies would likely need to redesign their business models in order to accommodate the added costs of doing business with unregulated telecommunications providers. Services such as Netflix and Google's YouTube are particularly invested in net neutrality rules that prevent ISPs from charging more for fast lane access because their business models rely on quality and consistent video streaming, the type of content that would be penalized by "fast lane" policies. Companies such as Reddit and Netflix have even participated in online protests such as the September 10, 2014 Internet Slowdown protest.<sup>32</sup>

The non-existence of an open internet will affect their business models in several respects. One of the aspects that could be affected, for example, is the use of hyperlinks. Many of the CPs currently gain a huge portion of their revenues from using hyperlinked

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<sup>32</sup> Simone A. Friedlander, *Supra note 21*, at 909.

ads on their applications or websites. In a non-neutral market, ISPs may have control over the access of consumers to those hyperlinks, blocking some to promote others. On the other hand, ISPs in a non-neutral model are able to gain more revenue by providing two different categories of bandwidth. If we go back to the bandwidth metaphor as highways, ISPs will be able to develop two lanes, one for CPs with high data traffic flow and data packets more sensitive to delay, and the other for CPs with lower traffic flow and data less sensitive to delay. There are multiple proposals for regulating such a tiering regime. However, ISPs target charging CPs with high data traffic flow through this bandwidth tiering model. Additionally, the non-existence of a neutral market may give ISPs power to disadvantage CPs when they decide to vertically integrate in the area of providing content and applications. This is elaborated in the coming chapter.

The very first argument brought up regarding net neutrality by proponents of an open internet argue that the net neutrality principle is “a structural remedy to guard against an erosion of the ‘neutrality’ of the network as between competing content and applications. Critics, meanwhile, have taken open-access regulation as unnecessary and likely to slow the pace of broadband deployment.”<sup>33</sup> One of the main concerns of net neutrality proponents is the idea that ISPs could block certain content for anti-competition reasons. ISPs are currently vertically integrating into the production of content and applications, which in a non-neutral model, ISPs could have advantage over the competing applications of CPs. For example, when an ISP develops or acquires a Video On Demand (VOD) platform similar to Netflix or HBO, or acquire an already established CP as AT&T’s acquisition of DirecTV, it could offer its content to consumers for free or for a fraction of the fees it charges for other competing platforms. Such practices enviably result in the control of the ISPs of the consumers’ choice. Furthermore, an ISP like Vodafone Netherlands can, through a sponsored data plan agreement with a certain CP like HBO, give it an advantage over its competitors.

CPs base their support for net neutrality obligations on the idea that the giant entities like HBO, DirecTV or Netflix will not be affected much by a non-neutral market, but the

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<sup>33</sup> Tim Wu, *supra* note 5, at 141.

startup entities will not have a fair chance within this model to one day become as big as they are. While, this argument may seem very plausible, it is not the true intentions of giant CPs. CPs prefer a neutral market where they do not have to pay ISPs to gain advantage but remain in sole control of the offers they give to their subscribers. If HBO Netherlands wants to offer free access to its content to its subscribers, HBO can do so without having to pay Vodafone to gain an advantage over its competitors. This is a way for CPs to limit, as much as possible, the control of the ISPs and pay as little as possible in promoting their services/content.

Meanwhile, critics of net neutrality argue that “Strict net neutrality leads to a loss in social welfare.”<sup>34</sup> This is due to the rapid development of technology, internet is currently experiencing rapid traffic inflation, which according to the critics of net neutrality, results in an inefficient allocation of capacity to different types of content. This is partially and practically true since the amount of traffic generated by giant CPs like YouTube, Facebook and Netflix is incomparable to that generated by startups. The proposed solution, from their point of view, is the implementation of a bandwidth tiering regime.<sup>35</sup> “Bandwidth tiering leads to prioritized delivery of time-sensitive content and is always welfare-superior to strict net neutrality.”<sup>36</sup> According to this argument content is divided between time sensitive content and content that a delay would not affect (time insensitive content). In this sense, time sensitive content includes, but is not limited to, those related to Voice Over IP (VOIP) calls (e.g. facetime and skype), live streaming videos and online games. Less sensitive content includes emails, web browsing and file sharing, for example.<sup>37</sup>

Under a strict version of net neutrality (best effort for all traffic, no prioritization, zero prices on the content side), the network essentially constitutes an unmanaged common property resource. Net neutrality therefore leads to excessive exploitation by CPs (traffic inflation). In addition, the symmetric treatment of time-sensitive and time-insensitive traffic is inefficient (misallocation of traffic). By charging for traffic and handling time-sensitive traffic with priority, the ISP can serve as the

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<sup>34</sup> Peitz, Martin, & Florian Schuett, *Supra note 7*, at 17.

<sup>35</sup> *See, id.*

<sup>36</sup> *Id.*

<sup>37</sup> *Id.*

guardian of the common property resource. This possibly reduces redundancies and other sources of inflation and gives time-insensitive traffic lower priority which increases the capacity effectively available for time-sensitive traffic.<sup>38</sup>

It is crucial to note here that, this particular view is not concerned with the CPs or the amount of traffic such an entity uses. It does focus on the type of traffic. Furthermore, this view proposes the handling of time sensitive traffic with priority over time insensitive traffic. This model may be practical in terms of the proper allocation of traffic as well as the elimination of discrimination, since all-time sensitive data will be treated the same as time insensitive ones. This model could actually threaten start-up CPs. Such models assume two scenarios. The first one is a paid bandwidth tier specified for time sensitive traffic and a second bandwidth tier either completely free of charge or for lower fees. While certain CPs may not be affected by the costs, such costs may be a burden on startup CPs which creates a barrier to market entrance. The second scenario is a two-tier bandwidth model with both free of charge. This latter scenario, while perfect for CPs, requires significant investment by ISPs to develop a parallel bandwidth, which is exactly what ISPs are trying to avoid.

Another argument/concern that is held against net neutrality, is the decline in investment. ISPs claim that they invest billions in the development of their infrastructure to cope with the rapid development and increase in data traffic flow. The application of net neutrality obligations restricting their control over their network and requiring further infrastructure development will result in the decrease of investments in the telecom industry.<sup>39</sup> However, according to the Internet Association 2015 report “ISPs investment is up over time, and shows no decline as a result of the implementation of strong, enforceable net neutrality rules in 2015.”<sup>40</sup>

“Communications regulators over the next decade will spend increasing time on conflicts between the private interests of broadband providers and the public’s interest in a

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<sup>38</sup> Peitz, Martin, & Florian Schuett, *supra note 7*, at 17.

<sup>39</sup> See, INTERNET ASSOCIATION, *Net Neutrality facts*, available at, <https://netneutrality.internetassociation.org/facts/> [last accessed on Jan. 21, 2020].

<sup>40</sup> Peitz, Martin, and Florian Schuett, *supra note 7*, at 17.



competitive innovation environment centered on the Internet.” Tim Wu. One of the main debates around net neutrality is related to its effectiveness in promoting the welfare and the development of telecommunication technology, as mentioned above. Peitz, Martin, and Schuett argue that CPs use congestion control techniques to avoid delay of their content which results in additional traffic on the network, impacting and delaying the content of other CPs further. Such techniques include the preloading of videos, for example, that are not opened by the user and that even might never be opened. While consumers are scrolling through Facebook or Instagram they may find that a few seconds of each video, they pass by, has already been preloaded although they have not opened such video yet. CPs use this technique to avoid the normal few seconds delay, but this causes unnecessary traffic. Consequently, this is why ISPs argue that “net neutrality often leads to socially inefficient allocation of traffic and traffic inflation.” Furthermore, Tim Wu, argues that net neutrality alone is insufficient to insure non-discrimination. Wu argues that “the preferable framework for ensuring network neutrality...forgoes structural remedies for a direct scrutiny of broadband discrimination.”

In conclusion, to articulate the debate, CPs argue that the non-existence of open internet regulations will result in: (1) unreasonable data discrimination by ISPs, (2) distortion of competition through vertical integration and paid prioritization and (3) barrier to entry. Meanwhile, ISPs argue that open internet regulations will result in: (1) inefficient allocation of data traffic, (2) increase in the service prices due to the need for developing the network, (3) decrease in investments and (4) decrease in the quality of service. All of the mentioned arguments are based on a consumer welfare perspective. Distortion of competition whether through data discrimination, vertical integration, paid prioritization or barrier to entry will result, in the long run, in less content and applications available for consumers. Furthermore, the decrease in the quality of service and prices increase will directly affect consumers. Thus, it is essential to determine what exactly constitutes consumer welfare when it comes to the telecommunications services in general and the internet in particular.

## **II. Impact of Net Neutrality obligations on consumer welfare**

Both ISPs and CPs generate their revenues through the use of consumers of their services. Furthermore, increased consumer demand over the internet during the past decade, has transformed the internet from being a mere service to an essential utility. Consumers best interest or welfare defers from one service to another. It is also not self-defined with regards to the internet. Consumer welfare is the most debated concept when addressing the impact of net neutrality obligations. In addition, it is the most important factor affecting the regulatory decisions with regards to telecommunication regulations in general.

This chapter starts with defining consumer welfare with regards to internet services. This chapter argues that there are three main factors that affect consumer welfare, namely: prices, quality of service (network efficiency), and consumer freedom to access content. This chapter then explore the threats pertaining such factors and the effects of net neutrality obligations in potentially eliminating such threats.

### **A. Defining consumer welfare**

Defining consumer welfare is not solely a legal question. It is also an economic one. Economists, in attempting to define consumer welfare, divide the term into two: who is a consumer and what counts as the welfare of such consumer or what is in his/her best interest.

It is necessary to differentiate first between who is a purchaser and who is a consumer in this respect.<sup>41</sup> A purchaser is “a firm part of the supply chain”<sup>42</sup> which is buying the product for production purposes and not consumption.<sup>43</sup> According to this classification, a consumer, is an individual or a firm that is buying the product for “consumption and not production”. In the telecom industry the is known as the End User.<sup>44</sup> Such a distinction, between purchase and consumer, is particularly important in competition/antitrust laws to

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<sup>41</sup> See, Victoria Daskalova, *Consumer Welfare in EU Competition Law: What Is It (Not) About?*, 11, *The Competition Law Review*, 131, 137 (2015).

<sup>42</sup> *Id.*

<sup>43</sup> *See id.*

<sup>44</sup> *See id.*

determine the impact of a specific case, action or regulation on consumers, business partners part of the supply chain and competitors.<sup>45</sup> It is also critical in determining the impact of vertical integration of ISP, within the telecom market on both CPs and consumers.

In attempting to apply such a distinction in the telecom market, the purchasers in this sense, and according to the arguments of ISPs, are CPs, while consumers are individuals/end users. The bandwidth-tiering and two-sided market approaches assume that CPs are purchasers. However, this is not accurate, since the existence of CPs and ISPs are codependent. Without the content and applications provided by CPs, the ISP network is useless and vice versa. Thus, a consumer of the telecom market is assumed to be only an individual/end user.

After determining who counts as a consumer, it is also important to define the elements of the consumer's welfare. Consumer welfare is a very broad term, that is debated both in law and economics. Measuring and determining consumer welfare defers from a service or a product to another, as well as it changes over time by changing the "exogenous variables"<sup>46</sup>. However, the static fundamentals of the internet and the basic expectations/needs of the consumers are three: Prices, Quality of service, and Freedom to access content. The reason behind selecting those three factors in particular are articulated below.

1. Prices:

"In economics, the term "consumer welfare" means the buyer's well-being: the benefits a buyer derives from the consumption of goods and services."<sup>47</sup> The benefits and losses of a buyer, in economics, is measured through the analysis of a buyer's demands, prices, inclinations, and income as "exogenous variables".<sup>48</sup> Simply, according to economists,

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<sup>45</sup> See, Victoria Daskalova, *supra* note 41, at 137.

<sup>46</sup>Barak Y Orbach, *The Antitrust Consumer Welfare Paradox*, 7, Journal of Competition Law & Economics, 138, 139 (2011).

<sup>47</sup> *Id.*

<sup>48</sup> See, *id.*, at 139.

consumer welfare is achieved when the amount a buyer is willing to pay for a specific good or service is less than or equals to the amount such a buyer actually pays:<sup>49</sup>

According to this definition, the lawyer would probably consider that “harm” under this standard would mean a reduction in the “wealth” of the consumer because of an increase in prices. Accordingly, consumer “benefit” under this standard would mean an increase in the “wealth” of the consumer by means of price reduction. Thus, while in theory we aspire to maximizing welfare, in practice, we use price effects as a proxy. In practice welfare is reduced to a price advantage.<sup>50</sup>

Likewise, law has acknowledged price as the most important determining factor of consumer welfare. EU competition law provide the first definition of consumer welfare in the 1997 Green Paper on Vertical Restraints and highlights the critical role of prices:

To further the interest of the consumer is at the heart of competition policy. Effective competition is the best guarantee for consumers to be able to buy good quality products at the lowest possible prices. Whenever in this green paper the introduction or protection of effective competition is mentioned, the protection of consumer’s interest by ensuring low prices is implied.

Consequently, according to law and economics the first determining factor of consumer welfare is prices. The lower the prices the closer the economy gets to consumer satisfaction. It is also important to note that both law and economics link price to competition; more competition means lower prices, which was further established by net neutrality obligations.<sup>51</sup>

Referring to the actual net neutrality debate, further proves that prices are one of the major concerns of both ISPs and CPs in that they directly affect consumer behavior. According to the arguments presented on both sides of the debate. Both CPs and ISPs focus on, are prices and quality of service. Both CPs and ISPs are focusing on the amount of revenue achieved without incurring more costs and at the same time without having to increase the price of the services. ISPs mainly have to invest into the development of their network to cope with the increase in the traffic flow. In order to do so, ISPs have to either invest in upgrading their network or find a way to increase their revenues and

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<sup>49</sup> See Barak Y Orbach, *id.*

<sup>50</sup> Victoria Daskalova, *supra note 41*, at 135.

<sup>51</sup> See, *2015 Open Internet Order*, 30 FCC Rcd at 5662, para. 103.

consequently increase their cash flow to pay for the network upgrade. On the other hand, CPs are in a constant race to develop content to keep consumers demand high on the content and applications they provide, which also incurs upon them costs. Both parties, however, understands that consumers have a certain limit to what they are willing to pay for such services. Thus, at some point, when prices are too high, consumers will gradually decrease their usage of the internet or downgrades the subscription to access content. Accordingly, both CPs' and ISPs' interests clash when trying to avoid this latter scenario.

## 2. Quality of Service:

Despite the fact that prices come as the first determining factor of consumer welfare, economists believe that prices on their own should not be the exclusive aspect. Prices on their own could “lead to unintended effects – namely, to a sacrifice of the dynamic efficiency ... for instance, to a stifling of innovation and future efficiencies.”<sup>52</sup> Since the development and widespread of internet have always been based on innovation and development of services, quality of service mark the second factor for determining consumer welfare in the telecom market.

Quality of service and innovation are generally considered to be two different notions, but in the telecom sector development and innovation inevitably leads to a better quality of service. Hence, the development of dialup internet and the innovation of ADSL are clear examples of how a better quality of service is a direct consequence of development. Although this development did make the internet more expensive, thus affecting the price element, but it met consumers' needs of a faster internet, better quality of service and consequently consumer satisfaction. Accordingly, “[c]ompetition, efficiency, wealth maximization, and consumer welfare are related concepts in microeconomic theory, but they are not synonyms and may have inverse relations under certain conditions.”<sup>53</sup>

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<sup>52</sup> Victoria Daskalova, *Supra note 41*, at 135-136.

<sup>53</sup> Barak Y. Orbach,, *Supra note 46*, at 146.

### 3. Freedom to access content:

The third determining factor of the telecom consumer welfare is the freedom to access content. The internet became an essential utility, nowadays, because of the way it started. People have increasingly been attracted and attached to using the internet more and more because of the amount of content available and, more recently, the number of applications available that eventually made their lives much easier. Restricting individuals ability and freedom to access such lawful content contradicts the spirit that made such utility as essential as it is today.

“Consumers increasingly demand greater control over where, when, and how they watch video content, including the ability to stream their content on a computer or mobile device.”<sup>54</sup> Michael Powell, the Chairman of the FCC, highlighted four principles of internet freedom.<sup>55</sup> Such principles were later in, 2005, adopted by the FCC; “To encourage broadband deployment and preserve and promote the open and interconnected nature of the public Internet, consumers are entitled to[:]

- access the lawful Internet content of their choice.
- run applications and use services of their choice, subject to the needs of law enforcement.
- connect their choice of legal devices that do not harm the network.
- competition among network providers, application and service providers, and content providers.”<sup>56</sup>

The wide spread of the internet has always been based on access to content. Accordingly, having restrictions on access to lawful content will loss the internet one of its mean attractive features and will certainly negatively affect the consumer experience and interests. Thus, it marks the third determining factor of telecom consumer welfare.

In conclusion, when addressing the principle of net neutrality and its impact on consumer welfare, we shall find that the only common aspect linking all the above factors together is competition. Competition leads to better prices which achieves partially consumer

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<sup>54</sup> AT&T submission to the FCC, Nov. 21, 2016. P.1.

<sup>55</sup> Simone A. Friedlander, *supra* note 21, at 915.

<sup>56</sup> *Id.*, at 919.

welfare.<sup>57</sup> Moreover, competition leads to more CPs providing more content to consumers, and by ensuring the consumers' freedom to access such content through net neutrality obligations the regulator further partially achieves consumer welfare. Finally, the availability of a number of competitors in the market forces such competitors to battle on more consumers by the development of their technology to provide a better quality of service, thus, leading as well to consumer satisfaction.

Accordingly, what threatens consumers welfare and how will net neutrality obligations eliminate such threats?!

### **B. ISPs' control over the market through price manipulation strategies.**

Since price is one of the most important determining elements of consumer welfare, restricting ISPs rights to provide competitive pricing strategies, that do not violate antitrust laws, would negatively affect consumer welfare.<sup>58</sup> Deregulating pricing, or letting ISPs determine their own prices, in this sense will not lead to higher prices but, in fact, ISPs will compete in lowering the prices as much as possible to gain more and more subscribers. Letting ISPs determine prices on its own does not constitute a risk on consumer welfare. However, restricting ISPs from certain practices is necessary to ensure that they do not distort competition in the process of adjusting prices to meet consumers expectations. ISPs sponsored data plans, paid prioritization and zero rating, at first, may seem consumer friendly since they lower the prices for certain services. But they threaten fair competition in market if not well regulated to avoid unreasonable data discrimination.

During the past years many lawsuits were filed in the USA either opposing net neutrality obligations or asking for the imposition of net neutrality obligations. The Netherlands Authority for Consumers and Markets on the 18<sup>th</sup> of December of 2014, imposed a EUR 200,000 fine on Vodafone Libertel B.V. for the "violation of the Dutch

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<sup>57</sup> *Hereinafter* note 86, Lina M. Khan at 738 argues that "pegging anticompetitive harm or high prices and/or lower output – while disregarding the market structure and competitive process that give rise to this market power – restricts intervention to the moment when a company has already acquired sufficient dominance to distort competition."

<sup>58</sup> *See*, e.g. J. Gregory Sidak, *A Consumer-welfare Approach to Network Neutrality Regulation of the Internet*, JOURNAL OF COMPETITION LAW AND ECONOMICS, at 374 (2006).

Telecommunications Act because of a breach of the obligation of net neutrality.”<sup>59</sup> Earlier Vodafone had announced a new HBO GO service, Sponsored Data plan, where users could enjoy 90 days of HBO GO application free of charge. In the application of the net neutrality obligations in their basic form, such an offer is considered, from a regulatory perspective, unreasonable data discrimination. HBO GO, as aforementioned, is Video On Demand (VOD) application where subscribers can stream television series, movies and documentaries on their televisions, tablet devices or mobile devices. HBO GO is not the only application that offer consumers such content, however, there are a number of other websites and applications that offers the same service/content: like Starz Play and Netflix. Vodafone offered its subscribers free access to this application, where using it does not charge or consume from their purchased broadband subscription package (zero-rating) while, on the other hand, if the consumer decided to use a different application they will get charged. This model of doing business in the telecom market is called a Sponsored Data Plan, which constitutes a major threat to competition in the market. This idea according to the basic obligations of net neutrality, as aforementioned, is considered to be unreasonable data discrimination of lawful content.

On the surface, zero rating and sponsored data plans provided by ISPs do seem to benefit consumers, at first. They have short term positive effects on consumers since they reduce prices. However, in the long run, such offers will eventually distort competition and consequently negatively affect the other two elements of consumer welfare; quality of service and freedom to access content. Zero rating works by, first, indirectly controlling the consumers’ choice. Consumers will choose to use a zero rated application or platform because it is much cheaper than its counterpart. By zero rating HBO GO Vodafone Libertel gave HBO an advantage over its competitors in the market (e.g. Netflix) by increasing its subscribers. While Netflix may be able to conduct a similar agreement with a different ISP in the Netherlands, start-ups in the same market will not afford do the same. This makes it very hard for start-up to reach consumers, restraining innovation, putting barriers to entry for start-up and reducing the variety of content over the long run. Furthermore, ISPs uses the same strategies to promote their content while vertically

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<sup>59</sup> Netherlands Authority Decision, *supra note 1*.



integrating into content providing. Thus, vertical integration of ISPs is the most threatening to competition.

1. Effects of ISPs' vertical integration into content providing services

Vertical integration of ISPs into content providing constitutes the most threat to competition as ISPs are more in control in the market through the manipulation of prices. Accordingly, vertical integration within the telecom market has been found to have adverse effects on competition. ISPs tend to engage in practices that puts unaffiliated CPs at a disadvantage.<sup>60</sup> Such practices inevitably either make it harder for unaffiliated CPs to reach the consumers, or tacitly direct the consumers choice to use a certain CP over another. Both scenarios have a “dampening effect on innovation,”<sup>61</sup> as well as, limiting effects on consumers choice.<sup>62</sup> Meanwhile, “enhanced competition leads to greater options for consumers in services, application, content and devices,”<sup>63</sup> Enhanced competition in this sense will also make it easier for consumers and CPs to reach one another, making consumers more free to access content.<sup>64</sup> Unfortunately, many giant ISPs are engaged in competition threatening activities/programs as a result of vertical integration. One of the those entities is AT&T:

[Whose] practices appear to mirror these harmful scenarios... The Sponsored Data charges imposed on unaffiliated edge providers appear to “*target competitors, including competitors to their own video services,*” which the 2015 Open Internet Order characterized as being of particular concern for potentially disrupting the virtuous cycle of competition and innovation in Internet services.<sup>65</sup>

Vertical integration is argued to be harmful based on two theories: leverage and foreclosure.<sup>66</sup> “leverage reflects the idea that a firm can use its dominance in one line of business to establish dominance in another.”<sup>67</sup> While foreclosure “occurs when a firm

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<sup>60</sup> See, *supra* note 51.

<sup>61</sup> *Id.*

<sup>62</sup> See, *id.* 140.

<sup>63</sup> *Id.*

<sup>64</sup> See, *id.*

<sup>65</sup> FCC, *AT&T's Sponsored Data Program letter*. Nov. 9, 2016 P3.

<sup>66</sup> See, Lina M. Khan, *hereinafter* note 86, at 731.

<sup>67</sup> *Id.*

uses one line of business to disadvantage rivals in another line.”<sup>68</sup> Both theories are used to oppose vertical integration, based on the fact that both have anti-competition and barrier to entry effects. AT&T’s acquisition of DirecTV resulted in foreclosure of competition. AT&T as an ISP used such acquisition to disadvantage competing CPs. On the other hand, proponents of vertical integration argues that by restricting it, the law would be restricting efficiencies as well.<sup>69</sup> Since, a company like AT&T will be highly unlikely for it to predator prices unless it was actually cheaper for it to do so.<sup>70</sup> Accordingly, restricting such vertical merger would eliminate potential benefits to consumers, in this case would be lower prices.

In application of the statements of the 2015 Open Internet Order, the FCC approved the acquisition of DirecTV by AT&T. DirecTV initially was the largest TV (Broadcast Satellite) provider in the US. To obtain the FCC approval of the acquisition AT&T agreed that within four years 25.7 million end users would have access to a high-speed broadband network of 45Mbps or higher.<sup>71</sup> Furthermore, AT&T agreed to offer around 50% “discounted fixed broadband service to low-income households that qualify for the government’s Supplemental Nutrition Assistance Program.”<sup>72</sup> Although AT&T has agreed not to favor DirecTV services, it is authorized to offer discounted bundles for DirecTV services along its high-speed internet services.<sup>73</sup> Leading AT&T to offer its Data free TV; Sponsored Data Plan. Randall Stephanson, AT&T Chairman and CEO said “Combining DirecTV with AT&T is all about giving consumers more choices for great video entertainment integrated with mobile and high-speed internet service,”<sup>74</sup>. “As a result of this transaction, AT&T leads the industry in offering consumers premier content, particularly live sports programming.”<sup>75</sup> Thus, AT&T claims that its vertical integration

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<sup>68</sup> *Id* 732.

<sup>69</sup> *See, id* 734.

<sup>70</sup> *See, id.*

<sup>71</sup> AT&T, *AT&T Completes Acquisition of DIRECTV*, July 24, 2015, available at, [https://about.att.com/story/att\\_completes\\_acquisition\\_of\\_directv.html](https://about.att.com/story/att_completes_acquisition_of_directv.html) [last accessed on Jan. 21, 2020].

<sup>72</sup> *Id.*

<sup>73</sup> *See, id.*

<sup>74</sup> *Id.*

<sup>75</sup> *Id.*

into providing content and applications by acquiring DirecTV achieves consumer welfare.

In September 2016, AT&T announced its “Data Free TV” featured on DirecTV App. Such program allows AT&T consumers who subscribes for DirecTV services to stream content available on DirecTV App on a “zero-rated basis”.<sup>76</sup> Zero-rated basis in this sense means that the video streaming will not consume from the subscribers’ monthly data package. In other words, AT&T consumers will pay for both their mobile data package and their DirecTV subscription, however, streaming videos on the DirecTV app will not consume from their mobile data package. AT&T called it a Sponsored Data Program, were they claimed that DirecTV pays AT&T a specified tariff for the sponsored data traffic and that AT&T makes such program available for unaffiliated third parties for the same tariff. Such program, however, triggered the FCC concern.<sup>77</sup> FCC was not concerned about zero-rating *per se*, “the Commission acknowledge in the 2015 Open Internet Order that Zero-rating-based business models may, in some instances, provide consumer and competitive benefits.”<sup>78</sup> Nevertheless, the FCC’s concern was based on the idea that the AT&T’s claim that both DirecTV and unaffiliated third parties are on the same footing. Since the later are both being subjected to the same tariff. Accordingly, AT&T claimed that they are in compliance with the Open Internet Order; they are not engaged in any activity that constitutes a distortion of competition.<sup>79</sup>

One of the main concerns of telecom regulators, is sponsored data plans/Zero-rating, for the potential negative effects that it may have on competition, especially because it is usually associated with vertical integration. The FCC 2015 Open Internet Order Paragraph 151 states that:

While our bright-line rule to treat paid prioritization arrangements as unlawful addresses technical prioritization, the record reflects mixed views about other practices, including usage allowances and sponsored data plans. Sponsored data plans (sometimes called zero-rating) enable

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<sup>76</sup> FCC, *supra* note 65, at 1.

<sup>77</sup> *See, id.*

<sup>78</sup> *Id.*

<sup>79</sup> *See, AT&T, supra* note 54.

broadband providers to exclude edge provider content from end users' usage allowances. On the one hand, evidence in the record suggests that these business models may in some instances provide benefits to consumers, with particular reference to their use in the provision of mobile services. Service providers contend that these business models increase choice and lower costs for consumers. Commenters also assert that sophisticated approaches to pricing also benefit edge providers by helping them distinguish themselves in the marketplace and tailor their services to consumer demands. Commenters assert that such sponsored data arrangements also support continued investment in broadband infrastructure and promote the virtuous cycle, and that there exist spillover benefits from sponsored data practices that should be considered. On the other hand, some commenters strongly oppose sponsored data plans, arguing that *"the power to exempt selective services from data caps seriously distorts competition, favors companies with the deepest pockets, and prevents consumers from exercising control over what they are able to access on the Internet,"* again with specific reference to mobile services. In addition, some commenters argue that sponsored data plans are a harmful form of discrimination. The record also reflects concerns that such arrangements may hamper innovation and monetize artificial scarcity.

Paragraph 152 thereof continues:

We are mindful of the concerns raised in the record that sponsored data plans have the potential to distort competition by allowing service providers to pick and choose among content and application providers to feature on different service plans. At the same time, new service offerings, depending on how they are structured, could benefit consumers and competition. Accordingly, we will look at and assess such practices under the no-unreasonable interference/disadvantage standard, based on the facts of each individual case, and take action as necessary."

While the FCC did not deny that zero-rating benefits the end users, it has raised its concern that such zero-rating plans might "distort competition". This is why the FCC did not explicitly restrict zero-rating altogether. They left it, however, to be studied on a case by case basis, leading to AT&T's DirecTV Sponsored Data Plan debate between AT&T and the FCC on whether it benefits the consumers or distorts competition and accordingly non-compliant with net neutrality obligations.

AT&T in its submission to the FCC in November 2016 had highlighted its compliance with the 2015 Open Internet Order. It stressed on the idea that it met all

nondiscrimination requirements and that it had further avoided distorting of competition “by allowing content providers to specify how much data they want to sponsor, and charging them the same low per gigabyte rate regardless whether they are big or small or how much data they purchase.”<sup>80</sup> AT&T further argues that

Data Free TV is certainly not free to AT&T. As more and more consumers discover the benefits of that service, AT&T will see escalating usage on its mobile network, where video already accounts for a clear majority of traffic. AT&T will need to respond to those new usage demands by making capital-intensive investments, which will add to the billions AT&T has already spent to keep up with skyrocketing mobile video usage.<sup>81</sup>

However, the FCC believed that the AT&T claim “fails to take account of the notably different financial impact on unaffiliated providers.”<sup>82</sup> The FCC argued that “while there is no cash cost on a consolidated basis for AT&T to zero-rate its own affiliate's mobile video service (since DIRECTV's "cost" of Sponsored Data is equal to AT&T Mobility's Sponsored Data "revenue"), an unaffiliated provider's Sponsored Data payment to AT&T Mobility is a true cash cost.”<sup>83</sup> Furthermore, if an AT&T consumer decided to choose a different CP other than DirecTV or a CP that has not purchased AT&T Sponsored Data program, such consumer will be paying for the mobile data package and the streaming services subscription were such streaming service will be consuming from the data package making an additional cost on the consumer. Thus, indirectly affecting consumers choice.<sup>84</sup> This later scenario was the mean concern of the FCC as it could have “anti-competitive effects” as well as a limiting effect on consumers choices.<sup>85</sup> Although, the data from unaffiliated CPs have not been blocked or throttled by AT&T yet, the consumers are still being directed to use certain CPs over others because of the fact that it is cheaper.

Paragraph 21 of the Open Internet Order does what:

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<sup>80</sup> AT&T, *supra* note 54.

<sup>81</sup> *Id.* .

<sup>82</sup> FCC, *supra* note 65, at 2.

<sup>83</sup> *Id.*

<sup>84</sup> *See, id.*

<sup>85</sup> *See, id.*, at 3.

Any person engaged in the provision of broadband Internet access service, insofar as such person is so engaged, shall not unreasonably interfere with or unreasonably disadvantage (i) end users' ability to select, access, and use broadband Internet access service or the lawful Internet content, applications, services, or devices of their choice, or (ii) edge providers' ability to make lawful content, applications, services, or devices available to end users. Reasonable network management shall not be considered a violation of this rule.

Although, AT&T's offer did not directly disadvantage consumers or CPs, it did have an indirect effect, by privileging affiliated CPs and burdening unaffiliated ones with extra costs. The was in addition to making it harder for startups to join the market, since startups might not be able to pay for the sponsored data plan costs. This would limit their chance of getting accessed by the consumers. AT&T through its sponsored data plan has been engaged in edging competition, in directing consumers choice which further distorts competition besides the fact that such action goes beyond the reasonable network management actions.

Opponents of net neutrality may argue that AT&T's sponsored data plan achieves consumer welfare by lowering prices while maintaining the quality of service. Nevertheless, it has been established that prices on their own, do not guarantee consumer welfare. Undeniably, lowering prices may satisfy the consumers but for the short term. On the long run, however, consumers will find less content due to the barriers to enter the market that such offer and similar ones caused. This is besides the fact that a decrease in competition will cause a decrease in the quality of service. This was one of the most important steps taken by a regulator in acknowledging that low prices on its own is not a proof of "sound competition". The FCC did not look at the short term benefits of the consumers. They looked, however, on the future impact of such an offer on innovation and startups, as well as the fact that it gives giants in the market like DirecTV an edge over less established competitors.<sup>86</sup> Consequently, the one thing that threatens

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<sup>86</sup> See also, Lina M. Khan, *Amazon's Antitrust Paradox*, THE YALE LAW JOURNAL, at 716, (2017).

competition the most, within the telecom market, is the idea of vertical integration as mentioned above.

## 2. Potential effects of the bandwidth tiering approach

In order to make up for the extra costs ISPs incurred during the process of network development to cope with rapid increase in data traffic flow; high demand on the internet, ISPs came up with the idea of bandwidth tiering. Economides, Nicholas, and Joacim Tåg suggests “a two-sided market.”<sup>87</sup> The current market model is based on data being transferred from CPs to consumers through ISPs, however, ISPs can only charge one side of the market which are the consumers, with “the price zero” on the CPs. Thus, they proposes a regime were ISPs could charge CPs as well.<sup>88</sup> Nevertheless, net neutrality as a principle goes against the theory of bandwidth tiering. According to the opponents of net neutrality, the telecom market should be approached as a two sided market.<sup>89</sup> One that regulates the consumers relationship with the ISPs and another that regulates the CPs’ relationship with ISPs. This view assumes that ISPs delivers a services to CPs similar to that delivered to consumers. It also requires the assumption that the content made available by CPs is in fact a product being sold to consumers. In another words, CPs revenues are based on the content they deliver to the consumers. Without the network owned and operated by ISPs, CPs will not be able to reach the consumers and sell their produces. Accordingly, the costs for the ISPs services should be incurred by both CPs and consumers. Proponents of the broadband tiering approach further base their argument on the idea that by incurring costs on consumers alone “network neutrality regulation would deny broadband access to the large number of consumers who would not be able to afford, or who would not have the willingness to pay for, what would otherwise be less expensive access.”<sup>90</sup> Critics of net neutrality argues that “[t]here is certainly no basis in economic theory to presume that it would be socially optimal for end users to pay for all of the cost of building a high-speed broadband network while the companies that deliver

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<sup>87</sup> See, Nicholas Economides & Joacim Tåg, *Network Neutrality on the Internet: A Two-Sided Market Analysis*, 24, INFORMATION ECONOMICS AND POLICY, 91, 91-104 (2012).

<sup>88</sup> See, *id.*

<sup>89</sup> See, J. Gregory Sidak, *supra* note 58, at 361.

<sup>90</sup> *Id.*, 352.

content or applications to those same end-users over that network ... pay nothing.”<sup>91</sup> Proponents of the bandwidth tiering approach argue that there should be no motive for ISPs to harm CPs.<sup>92</sup> On the grounds that the existence of the ISPs, to begin with, depends on the content provided by CPs.<sup>93</sup> “Email was the “killer-application” that generated the demand for dial-up Internet access. Without email, there would have been significantly less need for dial-up Internet access.”<sup>94</sup>

The above mentioned arguments seems contradicting to a huge extent. It is important to stay reminded that both ISPs and CPs are codependent in the telecom market. The existence of ISPs and the revenues generated from their networks depend on the amount of data traffic made by consumers. Every year the internet reaches more users.<sup>95</sup> Social media and Mobile technology are the main recent factors that have affected the use of the internet. They have also changed the amount of traffic on the internet. In December, 1995 there were only 16 million users of the internet, which was around 0.4% of the world population. The users began doubling over the following four years.<sup>96</sup> By December 1999, internet users reached 248 million, which were about 4.1% of the world population. It never stopped to this point, the number of users kept increasing over the years. By June 2015, the number of users reached 4208 million, which is about 55.1% of the world population.<sup>97</sup> It is interesting to note that for the ten years period from 1995 till 2005 the number of users grew only 0.4% of the world population to 15.7%.<sup>98</sup> However, from 2005 till 2015 the number of users increased from 15.7% to 46.4% of the population, which is about double the growth of the previous 10 years.<sup>99</sup> From 2005 till 2015 a number of very popular social media platforms and applications were made available to

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<sup>91</sup> *Id.*, 362.

<sup>92</sup> *See, id.*

<sup>93</sup> *See, id.*

<sup>94</sup> *Id.*

<sup>95</sup> *See*, Internet World Stats, *Internet Growth Statistics*, available at, <https://www.internetworldstats.com/emarketing.htm> [last accessed on Jan. 21, 2020].

<sup>96</sup> *Id.*

<sup>97</sup> *Id.*

<sup>98</sup> *Id.*

<sup>99</sup> *See also*, ROBERT ZELNICK & EVA ZELNICK, ILLUSION OF NET NEUTRALITY: POLITICAL ALARMISM, REGULATORY CREEP, AND THE REAL THREAT TO INTERNET FREEDOM 2013, at 4.



consumers. In 2006 Facebook was made available to public.<sup>100</sup> As of December 2018, Facebook had over 2.32 billion active users monthly, 1.52 billion of which log onto Facebook daily from their mobile phones.<sup>101</sup> Aside from Facebook, the same ten years witnessed the growth of a number of other popular platforms such as YouTube that was launched in 2005.<sup>102</sup> “YouTube is the world's most popular online video site, with users watching 4 billion hours’ worth of video each month, and uploading 72 hours’ worth of video every minute.”<sup>103</sup> Both platforms and many others platforms and applications such as, Instagram, Twitter, snapchat, Google Maps, Netflix, HBO and LinkedIn contribute to the continues growth of data traffic.

The increased amount of content and the number/variety of applications has increased the number of consumers of the ISPs as well as it increased their average monthly data consumption. Such increase is frequently referred to as data traffic inflation. It is important to acknowledge that data traffic inflation is not at all a bad thing for ISPs. The more demand on data the more revenues ISPs are able to make. Accordingly, ISPs cannot claim that data traffic inflation will lose them investments, to the contrary data traffic inflation is an outstanding encouragement to invest in the telecom market. Furthermore, we cannot assume that ISPs are providing a service to CPs similar to that provided to consumers, and accordingly they should pay for their data traffic. Since logically, and according to the above mentioned statistics, it could be easily argued that CPs provide a product to ISPs, which is the data they pass through the ISPs network.

Finally, while the same cost will be incurred by the consumers, however, the debate is around which group of entities will reflect such costs on the consumers. In other words, ISPs seek a non-neutral market were they can offer paid prioritization services and

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<sup>100</sup> See, Sabrina Barr, *When did Facebook start? The story behind a company that took over the world*, INDEPENDENT, available at, <https://www.independent.co.uk/life-style/gadgets-and-tech/facebook-when-started-how-mark-zuckerberg-history-harvard-eduardo-saverin-a8505151.html>

<sup>101</sup> See, Don Noyes, *The Top 20 Valuable Facebook Statistics*, ZEPHORIA DIGITAL MARKETING, updated Jan. 2020, available at, <https://zephoria.com/top-15-valuable-facebook-statistics/> [last accessed on Jan. 21, 2020].

<sup>102</sup> See, Megan Rose Dickey, *The 22 Key Turning Points In The Histoty of Youtube*, BUSINESS INSIDER, Feb. 14, 2013, available at, <https://www.businessinsider.com/key-turning-points-history-of-youtube-2013-2#chad-hurley-registers-the-trademark-logo-and-domain-of-youtube-on-valentines-day-2005-1> [last accessed on Jan. 21, 2020].

<sup>103</sup> *Id.*

sponsored data plans to CPs that would assure revenue for their sunk investments and accordingly give them room to reduce services prices for consumers, resulting in more subscribers. This late scenario would burden CPs with more costs, forcing them to increase their subscription prices to make up for their expenditure. The same outcome is true if the aforementioned scenario gets reversed. In a neutral market ISPs are forced to invest in the development of their networks to ensure coping with the development of technology and increasing internet traffic. However, ISPs will not be able to divide there sunk investment between both CPs and consumers, thus, will be forced to ensure that all its revenues are achieved from subscription fees alone. At some point ISPs' only option to make up for their investments is to increasing their subscription tariffs. Meanwhile, CPs will have room to promote their content and applications. Accordingly, it is optimal for each to adjust their prices in accordance with its investments and revenues without incurring the other costs.

In conclusion, the telecommunication network in general and the internet in particular is a battle field where all CPs are in a constant fight for the attention of the consumers.<sup>104</sup> ISPs act as the link between CPs and consumers. Although both parties are codependent, from time to time their interests clash, as above mentioned. The opposing interests of ISPs and CPs is one of the main challenges that faces telecom regulators, especially when trying to ensure consumers best interest.

### **C. Consumer freedom to access content as direct effect of network efficiency achieved through the application of net neutrality obligations**

“The recent years have seen major changes in the Internet ecosystem: a few powerful content and service providers have developed activities which vastly increase traffic on the network (especially video). These actors, or their intermediary international transit players, use more and more network capacity but have no incentive to use it efficiently as they do not contribute to investments required to support the traffic they generate.”<sup>105</sup>

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<sup>104</sup> See also, TIM WU, *supra* note 5, at 146.

<sup>105</sup> Orange, *supra* note 31.

While, ISPs are concerned with the efficiency of the network, CPs are concerned with the availability and accessibility of the content and applications. The quality of service for internet users is built upon these two factors: network efficiency and the availability of content and applications. A variety of content and applications that are being used through an inefficient network are useless for consumers. For example, VoIP applications that are made available by ISPs, but are being throttled will become useless to consumers. Imagine a consumer trying to complete a Facetime call but the call keeps cutting off. Content availability and freedom to access through an inefficient network will still result in a negative consumer experience. The same is true if the scenario is reversed; an utterly efficient network with many blocked content is, in fact, also useless of consumers. Furthermore, “[E]fficiency requires an environment of creativity and innovation in the supply of content.”<sup>106</sup> In the area of media and technology the diversity and variety in content and applications is necessary. Such variety comes naturally in an environment that ensures “competition, innovation and free entry.”<sup>107</sup> Besides, content and applications suppliers should have “free and open access to potential users and consumers.”<sup>108</sup>

At the first glance, freedom to access content might not seem to be linked to quality of service. Quality of service is commonly viewed by how efficient the network is. Nevertheless, the technology of the network on its own does not guarantee the quality of service. ISPs need to have tools to manage the traffic transmitted through their network to ensure that time sensitive traffic, for example, reach consumers promptly. Thus, this chapter explores such link between a better quality of service and consumer freedom to access content.

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<sup>106</sup> David Waterman & Sujin Choi, *Non-discrimination rules for ISPs and vertical integration: Lessons from cable television*, 35, TELECOMMUNICATIONS POLICY, (2011) at 971.

<sup>107</sup> *Id.*, at 972.

<sup>108</sup> *Id.*

1. The three prohibited practices for ISPs: Blocking, Throttling and Paid Prioritization.

The FCC 2015 Report and Order strictly banned three practices by ISPs that “invariably harm the Open Internet.”<sup>109</sup> Those three practices are blocking, throttling and paid prioritization.<sup>110</sup> The No blocking rule entails that “[c]onsumers who subscribe to a retail broadband Internet access service must get what they have paid for—access to all (lawful) destinations on the Internet.”<sup>111</sup> The no throttling rule states that ISPs “shall not impair or degrade lawful Internet traffic on the basis of Internet content, application, or service, or use of a non-harmful device, subject to reasonable network management.”<sup>112</sup> Finally this is the prohibition of paid prioritization.

“Paid prioritization” refers to the management of a broadband provider’s network to directly or indirectly favor some traffic over other traffic, including through use of techniques such as traffic shaping, prioritization, resource reservation, or other forms of preferential traffic management, either (a) in exchange for consideration (monetary or otherwise) from a third party, or (b) to benefit an affiliated entity.<sup>113</sup>

After the FCC banned those three practices the 2015 Report and Order has specified one of the most critical regulations. In paragraph 21 thereof, the FCC specified that ISPs: shall not unreasonably interfere with or unreasonably disadvantage (i) end users’ ability to select, access, and use broadband Internet access service or the lawful Internet content, applications, services, or devices of their choice, or (ii) edge providers’ ability to make lawful content, applications, services, or devices available to end users. Reasonable network management shall not be considered a violation of this rule.

Although ISPs understand that certain practices, such as blocking, throttling and paid prioritizations negatively affect the efficiency of their networks, they still favor the economic outcome over the quality of service. Certain ISPs block VoIP calls to force

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<sup>109</sup> FCC, *supra* note 51.

<sup>110</sup> *Id.*

<sup>111</sup> *Id.*, para. 15.

<sup>112</sup> *Id.*, para. 16.

<sup>113</sup> *Id.*, para. 18

consumers into using GSM, especially while making international calls, because it is significantly more expensive. Thus, the efficiency of the network is not only determined by the technology and development of the network by ISPs but also by law. By prohibiting blocking, throttling and paid prioritization the law have increased the efficiency of the broadband network for the consumers. Thus, partially protecting consumers welfare.

It is important to note that the FCC explicitly prohibition blocking, throttling and paid prioritization for their direct harm it does to the open internet principle. However, the FCC was more flexible thereafter. Using the word “unreasonably” implicitly acknowledges the role of the ISPs as a gatekeepers. Giving ISPs room to discriminate between the data traffic through “reasonable network management” in order to provide a better service.

## 2. ISPs right for reasonable network management

ISPs mainly focus on two aspects, namely revenues, which was covered in the previous chapter, and quality of service. Since, ISPs are viewed as “the gatekeeper of quality of service” for its consumers.<sup>114</sup> ISPs, historically, have regularly banned consumers “from using applications or conduct that are meant to hurt the network or other users, like network viruses.”<sup>115</sup> One of the most referred to court decisions in this aspect is *Hush-A-Phone Corporation v. United States* of November 1956.

*Hush-A-Phone* was a manufacturer of a cup-like device, that attaches to the telephone, designed to reduce the surrounding noise pollution during a phone call and at the same times increases privacy of the conversation.<sup>116</sup> However, the American Telecom and Telegraph Company, the twenty-one associated companies of the Bell System and the United States Independent Telephone Association (collectively referred to as the “Intervenors”) have filed tariffs with the FCC that are not only related services fees but also “forbid attachment to the telephone of any device *not furnished by the telephone*

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<sup>114</sup> TIM WU, *supra* note 5, at 149.

<sup>115</sup> *Id.*, at 150.

<sup>116</sup> *Hush-A-Phone v. US*

company”<sup>117</sup> besides their right to suspend or terminate the service.<sup>118</sup> Such tariffs stopped distributors from selling Hush-A-Phone. Which lead Hush-A-Phone to file a complaint with the FCC demanding it to order intervenors “(1) to discontinue the described interferences with Hush-A-Phone distribution and use; and (2) to amend the foreign attachment provisions of their tariffs to permit the use of Hush-A-Phone.”<sup>119</sup> The findings specified in the decision of the FCC in this complaint was the most interesting. The FCC found that Hush-A-Phone as a device does not affect the network or facilities of the telephone companies, which on its own could have resulted in the waiver of the tariffs. However, the FCC found that using Hush-A-Phones “[w]hen the device is used for maximum privacy, there is a noticeable loss of intelligibility (up to 13 decibels), which means that the person to whom the Hush-A-Phone user is speaking hears a lower and somewhat distorted sound.”<sup>120</sup> Accordingly, “it is not unjust and unreasonable to forbid the use of Hush-A-Phone.”<sup>121</sup> Since the user on the other end of the telephone will be hearing a very low almost mute voice.

Then, how is the Hush-A-Phones decision relevant to the current debate around regulating the internet? The FCC in its decision established a hierarchy, prioritizing elements for regulating the market. The first element taken in consideration was consumer welfare, then the security and safety of the network came second, while the interests of the parties come last. Which is typically how proponents of net neutrality are currently basing their arguments.

Tim Wu compares three different regulatory approaches to net neutrality regulations; “structural remedies, a non-discrimination regime, and self-or non-regulation.”<sup>122</sup> The structural remedies Tim Wu highlighted entails that, according to the main principles of net neutrality consumers are free to attach devices to the internet as long as such devices

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<sup>117</sup> *Id.*

<sup>118</sup> *See, id.*

<sup>119</sup> Hush-A-Phone v. US

<sup>120</sup> *Id.*

<sup>121</sup> *Id.*

<sup>122</sup> TIM WU, *supra* note 5, at 142.

do not harm the network and innovators are free to supply such devices.<sup>123</sup> Same for content; consumers are free to access lawful content while CPs are free to provide them.<sup>124</sup> However, Tim Wu argues that “Such a regime avoids some of the costs of structural regulation by allowing for efficient vertical integration so long as the rights granted to the users of the network are not compromised.”<sup>125</sup> Accordingly, ISPs have a grey area, were they can practice reasonable network management without affecting consumer welfare. And while it has been established that consumer welfare is partially based on competition, ISPs reasonable network management should not constitute any anti-competition practices.

In conclusion, reasonable network management is based on the idea that ISPs are the gatekeepers for the quality of service. Thus, such management shall be for the sole purpose of protecting the network and promoting the quality of service but as further away from distorting competition as possible.

#### **Legitimate data traffic discrimination to insure network efficiency**

Opponents of net neutrality argue that the law should insure certain rights to the ISPs, based on the claim that the internet is not a public utility but a private property.<sup>126</sup> Although the public is generally invited to use these networks and servers, they remain private property under common law, and access therefore requires the owner’s consent.”<sup>127</sup> These rights include: (1) ISPs right to develop and innovate on its network, (2)determine the prices unilaterally while in compliance with the antitrust law, (3)reject certain content when believed that such content my negatively impact the performance of the network or harm any hardware attached to the network, (4) prioritize data package at its own discretion, (5) spare network capacity for the best performance of the network, (6) vertically integrate to provide content or applications.<sup>128</sup> Such rights are argued to increase consumer welfare for the reasons that will be elaborated below.

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<sup>123</sup> *See, id.*

<sup>124</sup> *See, id.*

<sup>125</sup> *Id.*

<sup>126</sup> *See, J. Gregory Sidak, supra note 58, at 370.*

<sup>127</sup> *Id.*, at 370.

<sup>128</sup> *Id.*, at 373.

Innovation and development are essential for networks to enhance its performance and meet consumer needs. One of the examples J. Gregory Sidak, a critic of net neutrality gave was the “implementation of unequal download and upload speeds.” Which he believed to be a critical development in shifting the “network resources to areas with greater value.” This is because under normal conditions, consumers tend to download more than they upload.<sup>129</sup>

Furthermore, refusing to carry out content that constitutes a potential or actual harm to the network is a right opponents of net neutrality believe that should be given to ISPs. This is because ISPs are “in the best position to make this judgment.”<sup>130</sup> On the one hand, CPs and consumers do not have any motive to protect the network, however, they are more concerned with maximizing their welfare.<sup>131</sup> Therefore, ISPs are the best situated to determine the ideal usage of the network.<sup>132</sup>

Prioritizing data packets directly affects consumer welfare. While all CPs claim their need for prioritized deliver, the content that is mostly affected by delayed delivery are time sensitive content such as VoIP.<sup>133</sup> Consumers experience is affected to a great extent of delayed delivery. ISPs should be in control of delivering time sensitive data with property to meet the needs of the consumers, and hence increasing consumer welfare. Opponents of net neutrality further contend that the paid prioritized delivery of data also benefits consumer welfare by actually lowering the prices.<sup>134</sup>

Opponents of net neutrality argues that the reservation of capacity is closely related to the right to vertically integrate. While the right of vertical integration is associated with the right to compete in the market of providing content and applications:<sup>135</sup>

[F]or a network owner to vertically integrate into the supply of Internet content or applications—and thus compete against firms such as Google or Yahoo—it first must reserve the amount of capacity that it expects to use

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<sup>129</sup> See, *Id.*, at 374.

<sup>130</sup> See, *Id.*, at 380.

<sup>131</sup> *Id.*

<sup>132</sup> See, J. Gregory Sidak, *supra* note 58, at 380.

<sup>133</sup> *Id.*

<sup>134</sup> See, *Id.*, at 382.

<sup>135</sup> See, *Id.*



for that purpose. A regulation that prohibited a network owner from reserving capacity on its own network would be tantamount to a rule suppressing competitive entry by network owners into vertically adjacent markets for Internet content and applications.<sup>136</sup>

Reserving capacity for time sensitive data is essential to insure the best quality of service there is. However, reserving capacity for content provided by ISPs in the process of vertical integration is a pure example of unreasonable data discrimination and distortion of competition.

We cannot have a two-tiered Internet with fast lanes that speed the traffic of the privileged and leave the rest of us lagging behind. We cannot have gatekeepers who tell us what we can and cannot do and where we can and cannot go online. And we do not need blocking, throttling, and paid prioritization schemes that undermine the Internet as we know it.<sup>137</sup>

According to Tim Wu net neutrality is a goal, while non-discrimination and open-access are means to reach net neutrality.<sup>138</sup> Accordingly, certain legitimate data traffic control under strict regulations, is essential to insure a better quality service. ISPs should have a discretionary power, to reasonably, discriminate between data traffic based on its latency sensitivity. Since some classes of applications only function properly when bandwidth management is applicable. Such applications depend mainly on the quality of service, “Hence, the absence of bandwidth management can interfere with application development and competition.”<sup>139</sup> This also occurs under a strict regulatory framework.

Under the strict application of net neutrality regulations, ISPs are not allowed to practice any sort of data discrimination between the data traffic of the same type from different ISPs “by either pricing their transit differently or by providing them different qualities of service.”<sup>140</sup> The idea behind such prohibition is to limit and potentially deprive ISPs from

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<sup>136</sup> *Id.*

<sup>137</sup> FCC, *supra* note 51, Statement of commissioner Jessica Rosenworcel P320.

<sup>138</sup> *See*, TIM WU, *supra* note 5, at 145.

<sup>139</sup> *Id.*, at 154.

<sup>140</sup> RAKESH CHATURVEDI, SNEHIL GOPAL AND SANJIT KRISHNAN KAUL, WELFARE ANALYSIS OF NETWORK NEUTRALITY REGULATION, at 1.

impacting innovation by controlling consumers access to content provided by competing CPs.<sup>141</sup>

At the same time, data discrimination is sometimes necessary to deliver a better quality of service with regards to specific types of content and applications. VoIP (Voice over Internet Protocol) “is a technology that allows individuals to make telephone calls over the Internet.”<sup>142</sup> Consumers usually opt for VoIP to conduct their calls for the fact that it is much cheaper than traditional calls (Global System for Mobile “GSM”), especially with international roaming calls.<sup>143</sup> VoIP calls are transmitted in data packets the same way videos, pictures and email do.<sup>144</sup> Consumers voice gets broken in small data packets “that are sent over the internet and then reassembled at the destination.”<sup>145</sup> However, unlike emails, pictures or streaming videos, any delay in the transmission of VoIP packets results in the cutting off of the call, consequently affecting the consumers experience.

Consequently, data discrimination may be necessary. However, the appropriate application of such discrimination should be based on the type of data traffic. In other words, all VoIP should be treated the same, all online games should be treated the same...etc. But prioritizing Facetime calls while throttling WhatsApp calls and Facebook Messenger calls is unreasonable discrimination that will likely distort competition. In short, all similar traffic should be handled by ISP the same way. Furthermore, ISPs network management policy for handling such data should be clearly disclosed to CPs, regulator and consumers.

### 3. Variety and accessibility of lawful content

BEREC Guidelines on the Implementation by National Regulators of European Net Neutrality Rules Recital 3: The internet has developed over the past decades as an open platform for innovation with low access

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<sup>141</sup> *See, id.*

<sup>142</sup> J. Gregory Sidak, *supra* note 58, at 385.

<sup>143</sup> There is no source to prove this point, but personal experience and the popular practices of individuals.

<sup>144</sup> *See, J. Gregory Sidak, supra* note 58, at 385.

<sup>145</sup> *Id.*

barriers for end-users, providers of content, applications and services and providers of internet access services. The existing regulatory framework aims to promote the ability of end-users to access and distribute information or run applications and services of their choice. However, a significant number of end-users are affected by traffic management practices which block or slow down specific applications or services. Those tendencies require common rules at the Union level to ensure the openness of the internet and to avoid fragmentation of the internal market resulting from measures adopted by individual Member States.

When it comes to content and applications, the main focus is on their variety and accessibility. As previously mentioned, the demand on the internet has increased along with the increase of content and applications, such as social media platforms, VoD platforms and mobile applications. According to all FCC Orders and Reports of 2010, 2015 and 2018 the no-blocking rule is explicitly concerned with “lawful content”. Paragraph 15 of the 2018 Order and Report states that: “A person engaged in the provision of broadband Internet access service, insofar as such person is so engaged, shall not block lawful content, applications, services, or nonharmful devices, subject to reasonable network management.” Thus, what shall be considered as unlawful or lawful content?.

The 2018 FCC Order and Report did not define what lawful content is. However, paragraph 304 does state that “Nothing in this part prohibits reasonable efforts by a provider of broadband Internet access service to address copyright infringement or other unlawful activity.” Thus, restricting the lawfulness of the content to copyrights or any content that is considered unlawful according to any other applicable law in the state.

Many countries require Internet service providers to either filter or refuse to host service-providers that supply various kinds of forbidden content. Similarly, nations may maintain laws that expose information providers to liability for certain content, and therefore may potentially make the entire service illegal to operate. Examples of such laws are those banning Nazi materials or hate speech, libel laws, or those banning topics like criticism of the ruling party.

Another barrier is the blocking of specific applications. Countries or state telecommunications providers have occasionally blocked given applications, like Voice-over-IP services. There are more and less sophisticated ways of doing this. For example... a host of countries have

routinely blocked their citizens from reaching the web sites of Voice-over-IP companies like Skype. In another example, Google's web site has, in the past, been "hijacked" by the Chinese government, and its IP address given to a different site... Finally, some nations ban specific modes of service delivery, such as online delivery. The United States, for example, generally bans the "wire" delivery of gambling services, which is understood to include both telephone and Internet-based gambling. Other means of delivering gambling services (namely, casinos) are allowed. <sup>146</sup>

Accordingly, the lawfulness of the content differs from one state to another according to respective laws and regulations. For this reason, there cannot be a unified definition of lawful content. Determining whether the content is lawful or unlawful depends on the laws and regulations of the state as well as its courts' decisions. However, the arguments around the lawfulness of specific types of content is somehow distant from the issue of open internet and consumers freedom to access content. It is more related to the freedom of expression notion. So, for the purposes of this paper, lawful content refers to all content that is not prohibited/banned by the government for any reason whatsoever.

Freedom to access content, within the open internet notion, parallels competition. ISPs vertical integration into providing content may lead to unreasonable blocking of competitors content in order to promote their own. Additionally, ISPs may engage in paid prioritization agreements that will lead them to promote the content of their affiliated CPs over unaffiliated ones.

In conclusion, the three main prohibitions specified in all net neutrality obligations, as above mentioned, are blocking, throttling and paid prioritization or unreasonable discrimination of content, are linked to the ability of the consumers to freely access content of their choice.

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<sup>146</sup> Tim Wu, *The World Trade Law of Censorship and Internet Filtering*, 7, CHICAGO JOURNAL OF INTERNATIONAL LAW, (2006) at 263.

### **III. Divergent approaches to implementing Net Neutrality obligations in the Egyptian telecommunication regulations**

While net neutrality has gained a lot of attention in developed countries, they have not been yet introduced to the Egyptian market. This concluding chapter attempts to develop a basis for applying net neutrality obligations into the Egyptian market. The recommendations and arguments of this chapter are based on the uniqueness of the market as well as its history of development. All are based on the findings discussed in the previous chapters of this paper.

#### **A. Egypt Telecom market structure**

The Egyptian mobile and fixed broadband networks are considerably amongst the slowest networks worldwide.<sup>147</sup> They rank 92<sup>nd</sup> out of 136 countries in mobile broadband speed, and rank 169<sup>th</sup> out of 177 countries in fixed broadband speed.<sup>148</sup> The Egyptian telecommunication market has its own unique structure. Where, there are four main ISPs in Egypt, namely WE, Orange Egypt, Etisalat Misr, and Vodafone Egypt. The only national operator from these four is WE (previously known as Telecom Egypt), while, the remaining three are foreign investors. There are a number of other licensed ADSL operators like TE Data and Orange Data (previously known as Link.net), however, they are not really separate entities since each is owned by one of the main operators; Orange Data is owned by Orange Egypt and TE Data is owned by WE.

WE, being the only national operator in the market, is explicitly given some exclusive rights in the telecommunication laws and regulations. One of such rights is the right to build infrastructure, specifically fixed core networks and international submarine gateways. Article 60, paragraph 3, of the Telecom. Law no. 10 of 2010 states that: Telecom Egypt shall, during the period mentioned above, have the exclusive right to establish, operate and exploit international transmission networks between Egypt and any other country through international gateways via submarine and terrestrial cables,

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<sup>147</sup> See, Speed Test, *Speed Test Global Index*, available at, <https://www.speedtest.net/global-index> [last accessed on Jan. 21, 2020].

<sup>148</sup> *Id.*

microwave links and satellites for fixed services and provide Telephone, Fax, Telex and Telegraph Services over such networks. Additionally, the same article 60, paragraph 4 gives the NTRA (The National Telecommunications Regulatory Authority) a discretionary power in issuing resolutions, decisions and exclusive licenses to WE to provide other telecom services; stating the following:

“The NTRA Board of Directors shall have the right to issue a resolution enabling Telecom Egypt to exclusively perform some other activities and services which are being carried out only by Telecom Egypt at the date of applying this Law. This shall be effective within a limited period determined by the resolution without violation to the acquired rights of other licensed companies.”

Consequently, WE has always been the exclusive provider of fixed telecom services, and accordingly the exclusive owner of all ADSL infrastructure in Egypt. Thus, for the other operators to provide ADSL services they have to lease the necessary infrastructure from WE. On the other hand, WE was not initially licensed to provide mobile services. This market structure remained until August 2016.<sup>149</sup> In August 2016, Telecom Egypt, signed the 4G mobile license for a total cost of 7.05 billion Egyptian pounds.<sup>150</sup> By providing WE with the mobile license, the Egyptian regulator was left with no choice but to give the other three foreign investors licenses to build and operate their own fixed services as well. However, international gateways are only licensed to WE and Etisalat Misr the reason behind that is famously known to be related to the fact that international submarine gateways are an issue of national security, but this was not officially announced by the regulator.

Therefore, the introduction of the net neutrality principle into the Egyptian telecommunication regulations is complicated. Given the structure of the market discussed above the position of the regulator is unpredictable. From my perspective, there is one more given in the Egyptian market that makes it even more unique than that of the US and Europe, which is the fact that CPs do not have as much impact on the regulator as

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<sup>149</sup> National Telecom Regulatory Authority, *Telecom Egypt Awarded 4G Mobile Service License*, 31 August, 2016, available at, <http://www.tra.gov.eg/en/media-center/press-releases/Pages/Telecom-Egypt-Awarded-4G-mobile-Service-License.aspx> [last accessed on Jan. 21, 2020].

<sup>150</sup> *Id.*

the ISPs. Since CPs in Egypt are mostly local startups, they do not stand a chance in front of the ISPs given the current regulatory policy that gives priority to securing foreign investment. Besides the fact that the world giant CPs like Facebook, Google or Netflix are highly unlikely to enter the debate in the Egyptian market.

Although, net neutrality as a concept has been not discussed in the Telecom market in Egypt, Egyptian law, more or less, encapsulates the basic obligations of Net Neutrality. Article 2 of the Egyptian Telecom law no. 10 of 2010 states four basic obligations the telecommunication services must comply with namely: 1. Publicity of information, 2. Protection of free competition, 3. Provision of Universal Services, 4. Protection of Users' rights.

However, the Egyptian Telecom market is a clearly non-neutral market, where ISPs seek to enhance their consumer experience through sponsored data plans and zero ratings. Currently, Etisalat Misr, Orange Egypt, Vodafone Egypt and Telecom Egypt offer a different social media bundle that either presents an unlimited social media access free of charge or a discounted tariff if you access social media platforms such as Facebook, Snapchat, Instagram, Twitter or WhatsApp.

Guaranteeing competition within the telecom market through net neutrality obligations is one of the most important steps taken by any regulator to ensure healthy development of the telecommunications technology and achieve consumer welfare. According to the three previously mentioned elements of consumer welfare competition should be the main focus. Competition ensures fair prices and increase the quality of service by promoting development and innovation. The more competition among CPs the more content available for the consumers. Additionally, by giving CPs their rights to reach consumers the law will have, consequently, ensured the consumer freedom to access the content. Competition has been one of the main advantages of the period of liberalization and reform in the Egyptian telecom sector.

## **B. Liberalization and reform of the Egyptian telecom sector.**

One of the current problems in telecom markets is the fact that in each telecom market worldwide one or a small number of entities dominate. These entities that have taken their chance to establish themselves within the market, or even as monopolistic entity. Some authors argue that “a market dominated by a very small number of large companies is likely to be less competitive than a market populated with many small – and medium-sized companies.”<sup>151</sup>

(1) monopolistic and oligopolistic market structures enable dominant actors to coordinate with greater ease and subtlety, facilitating conduct like price-fixing, market division, and tacit collusion; (2) monopolistic and oligopolistic firms can use their existing dominance to block new entrants; and (3) monopolistic and oligopolistic firms have greater bargaining power against consumers, suppliers, and worker, which enables them to hike prices and degrade service and quality while maintaining profits.<sup>152</sup>

The Egyptian telecommunication market is one of the markets that has passed from being a monopolistic to an oligopolistic one, following a period of liberalization and reform that started in the late 1990's.<sup>153</sup> Telecom Egypt (TE) is the oldest and the only national telecom service provider in Egypt. It was established in 1918, known back then as the Telephones and Telegraph Authority, after the nationalization of the Eastern Telephone company by the state.<sup>154</sup> In 1992, TE launched internet services in Egypt.<sup>155</sup> TE was also

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<sup>151</sup> Lina M. Khan, *Supra note 86*, at 718.

<sup>152</sup> *Id.*

<sup>153</sup> The WTO, Trade policy Review Body- Trade policy review- Report by the Secretariat – Egypt, 2018, at 131-132, defined the timeline and main steps of the liberalization policy of the telecommunications sector in Egypt at follows:

- In 2005, 20% of the shares of Telecom Egypt were sold on the Egyptian stock market.
- In 2007, a third mobile telecom license was granted to Etisalat.
- In 2009, Telecom Egypt lost its fixed-line monopoly. Mobile operators were allowed first to provide fixed services in closed residential compounds, then wholesale services via interconnection offers.
- In 2010, fixed satellite services (FSS), mobile satellite services (MSS) and leased lines were fully liberalized while the wireless local loop was partially opened.
- In August 2016, Telecom Egypt obtained a 4G/LTE mobile license as the fourth mobile operator in Egypt.
- In October 2016, the three mobile companies obtained a 4G/LTE license and a fixed-line license each. They intend to provide fixed services through Telecom Egypt's network using full local loop, bit stream, and call origination solutions.

<sup>154</sup> Telecom Egypt, *About Telecom Egypt*, available at, <https://www.te.eg/wps/portal/te/About> [last accessed on Jan. 21, 2020].

<sup>155</sup> *Id.*



the first and only provider of GSM mobile technology which it introduced to the Egyptian telecom market in 1996.<sup>156</sup> After “years of monopoly and state dominance, reforms were adopted to enhance accountability, financial and managerial autonomy, and the technical competence of the utility operator whilst gradually liberalizing and creating competition in the sector.”<sup>157</sup> The year 1998 was a turning point in the Egyptian telecom market. The Telephones and Telegraph Authority was transformed into a joint stock company under the name of Telecom Egypt and the Telecommunication Regulatory Authority (TRA) it was “founded to separate regulatory activities from economic ones.”<sup>158</sup> Also in 1998, competition was introduced through granting cellular service licenses to Vodafone.<sup>159</sup> Mobinil in turn, bought their cellular license, in the same year from TE for 755 million Egyptian pounds.<sup>160</sup> Taking TE one step back leaving it to be the only fixed-line telephone services provider. “After a 10-year duopoly transition period a third cellular operator, Etisalat Masr, entered the market in 2007 guaranteeing further liberalization of the cellular market in Egypt.”<sup>161</sup>

Ten years after the introduction of competition in the Egyptian telecom market in 1998, “TE fell from number one to number three in 2007, with a share of just 27%, handing the top position to Mobinil. Mobinil's share kept rising steadily, moving to first position in 2007, but falling into second place behind Vodafone three years later.”<sup>162</sup> Moved this the market from being a pure monopoly with 100% of the market controlled by TE, to oligopolistic market with only 9% controlled by TE in 2011.<sup>163</sup>

The second phase of the reform came in 2016. With three existing operators providing mobile services and one operator providing fixed, the NTRA decided to issue four new Mobile 4G licenses. In August 2016, TE was finally able to reacquire a Mobile Services

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<sup>156</sup> *Id.*

<sup>157</sup> Amirah El-Haddad, *Welfare Gains from Utility Reforms in Egyptian Telecommunications*, 45, UTILITIES POLICY (2017) at 3.

<sup>158</sup> *See, id.*, at 2.

<sup>159</sup> *See*, Telecom revolution in Egypt, NTRA Annual Report 2017, at 14.

<sup>160</sup> *10 Most outstanding feature of the Egypt Telecom Market over the past 20 years*, Nov. 5, 2014, available at, <https://www.shorouknews.com/news/view.aspx?cdate=05112014&id=d26c3c24-0709-4974-b0c7-eb8dafc3f3fb> [last accessed on Jan. 21, 2020].

<sup>161</sup> Amirah El-Haddad, *supra* note 157, at 3.

<sup>162</sup> *Id.*, at 4.

<sup>163</sup> *See, Id* at 6.

license and compete with the three existing operators. The remaining three licenses were given to Orange, Vodafone and Etisalat in September 2016. TE is currently the most privileged among its competitors. It is one of the major shareholders in Vodafone Egypt holding a shares stake of 44.95%.<sup>164</sup> This is in addition to the fact that 80% of TE's shares are owned by the Egyptian government.<sup>165</sup> Also TE is the only operator in the market with infrastructure leasing services and international gateways.<sup>166</sup>

The strategy and organization of the reform as well as the rationale behind the NTRA distribution of licenses are based on the Egyptian WTO commitments in June 2002. Such commitments supports the exclusivity of TE in providing international gateways and leasing international private lines.<sup>167</sup> Nevertheless, the only entity that has been negatively affected by the liberalization and reform is TE, especially after the entry of Etisalat in the market. TE has maintained its position but the market shares of the remaining three entities have continued to constant increase during development and increasing demand for telecommunication technology. Then again TE has been unable to keep pace.

Yet, in spite of its lesser position, the exclusivity right granted to TE gave it an edge over its competitors, when the demand for data started to increase. Since all ISPs have no other option, with regards to ADSL, but to lease core network infrastructure from TE to provide these services, the increasing demand on the internet in Egypt gradually increased TE market share. TE provides its ADSL services through its affiliated company (TE Data). TE Data's market share goes over 76%.<sup>168</sup> "TE infrastructure is already in

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<sup>164</sup> *Id.*

<sup>165</sup> Telecom Egypt, *Ownership*, available at, <http://ir.te.eg/en/ShareInformation#Ownership> [last accessed on Jan. 21, 2020].

<sup>166</sup> WTO, Trade Policy Review Body - Trade policy review - Report by the Secretariat – Egypt, 2018, at 130.

<sup>167</sup> WTO, Egypt Schedule of specific commitments, 2002, at 2. Point 3(c) states that "Telecom Egypt has exclusive rights to provide cross-border transmission into or out of Egypt using any means of technology for an exclusivity period that terminates no later than 31/12/2005. Licensees providing international data communication services have to lease international private lines from Telecom Egypt throughout the period of exclusivity."

<sup>168</sup> See, *TE Data raises market share to 76% in 2Q2016*, ENTERPRISE THE STATE OF THE NATION, Aug. 14, 2016, available at, <https://enterprise.press/stories/2016/08/14/te-data-raises-market-share-to-76-in-2q2016/> [last accessed on Jan. 21, 2020].

place, giving it a first mover advantage in the market. These factors reduce incentives for any potential providers to build a parallel infrastructure to that of TE.”<sup>169</sup> TE Data’s huge market share did not negatively affect the quality of the service in Egypt. The steadily increasing demand for the internet pushed TE to develop and improve its network. However, a more competitive market specifically in the area of building core network infrastructure would have resulted in a better service over all. However, “TE’s first move advantage”<sup>170</sup> especially in populated areas has not encouraged competition. Accordingly, the Egyptian telecom market lacks competition in the area of building core network infrastructure, which affects overall the quality of service but this is an issue distant from the rules of Net Neutrality. In other words, bringing Egypt to a purely neutral market will neither solve this issue nor complicate it further.

### **C. Introducing Net Neutrality obligations in Egypt to promote innovation**

To move Egypt from a non-neutral market to a neutral one the aforementioned history and market structure should be taken in consideration. Egypt should be a safe market for innovation. Thus, strictly prohibiting unreasonable data discrimination and regulating ISPs network management strategies is a must.

1. Reasonable network management; prohibiting unreasonable data discrimination

Net Neutrality rules are, in fact, necessary in the Egyptian market since it is rich in innovation and content creation. As previously mentioned, CPs are not purchasers of the ISPs, per se, but both ISPs and CPs are co-dependent. Accordingly, suggesting a bandwidth tiering regime in the Egyptian market will not only kill innovation, by creating barriers to entry for start-up CPs, but also will defeat the soul of the internet that has made it such an important utility to begin with. Nevertheless, net neutrality obligations in Egypt will benefit quality of service when focused on its avoiding three main prohibitions; namely, no blocking, no throttling and no paid prioritization or unreasonable discrimination of content.

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<sup>169</sup> Amirah El-Haddad, *supra* note 157 at 15.

<sup>170</sup> Amirah El-Haddad, *supra* note 157, at 15.

For Egypt, to further move through with the development of its telecom industry, it needs to pay attention to content providing start-ups. The Egyptian market is not a market where giant CPs would fight for an open and free internet within. As an oligopolistic market, where three out of four of the ISPs are foreign investors, the ISPs in Egypt have a strong influence over the NTRA. This is not the same for CPs in Egypt which are mostly start-ups who do not stand a chance in opposition to ISPs. The market in Egypt, nevertheless, has witnessed the innovation of many start-up CPs which were later acquired by a giant CP or grew to join the global market. For example, Souq was developed and launched in Egypt and was later on acquired by Amazon. Also, Careem was developed and started in Egypt and was later on acquired by Uber. SWVL,<sup>171</sup> once a start-up and now an Egyptian service application that is competing with Uber in Egypt and growing rapidly. Thus, as these thriving companies grows, it is important for the telecommunication market in Egypt to maintain an open and free environment that focuses on and encourages innovation. This includes having strict rules and regulations prohibiting unreasonable data discrimination in any form whatsoever to limit ISPs control.

Reasonable network management, however, is also essential to insuring the proper allocation of data traffic. Data discrimination is sometimes necessary. Thus, regulating data discrimination in accordance with the current market structure is necessary to help develop the market and insure consumer welfare. Prioritizing delivery of time sensitive content may be the first authorized practice under the concept of reasonable network management. Since it will impact the quality of service delivered to consumers. One form of allowed data discrimination is permitting marketing offers in the form of zero rating and sponsored data plans, based on the type of traffic. ISPs should treat traffic of similar type equally. There is no harm in zero rating all VoD traffic, for example. In fact, such marketing offers works in favor of consumers by lowering prices and provoking competition among ISPs.

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<sup>171</sup> SWVL is a transportation services. Though SWVL application users can book bus rides with very affordable prices.

Prohibiting unreasonable data discrimination in Egypt should start with restricting data prioritization practices by ISPs. As previously mentioned, each ISP currently offers a social media bundle offering its subscribers a discounted tariff and/or zero rating while using specific social media platforms. This type of marketing offer does not constitute a risk on the market in general, as previously mentioned. In fact, it benefits consumers since it lowers prices. However, there are aspects that should be taken to consideration while regulating data discrimination in Egypt. First, since marketing offers benefit consumers by lowering the overall prices, marketing offers should be based on the type of data traffic. All platforms generating similar traffic such as, chat, music, video streaming, VoIP, and transportation services should be treated the same. This will aid in avoiding the risks of vertical integration. Ensuring the nonexistence of any anti-competition practices, through price manipulation, resulting from data discrimination would, hence, encourage innovation and guarantee consumers the freedom to access content. Finally, throttling and blocking of lawful content should be prohibited altogether.

Besides encouraging innovation, the telecom market in Egypt needs to keep pace with the development of technology worldwide. It needs to make available to its consumers the latest technologies existing worldwide with the lowest prices possible. Prices control consumers behavior. Thus, focusing on price and the quality of service will achieve consumer best interest. As indicated earlier, prices are the first and most important factor affecting consumer welfare. The prices of the telecommunication services in Egypt are not determined by the NTRA.<sup>172</sup> Operators determine the method of setting up their prices during the process of applying for the license, while, the NTRA approves this method through granting the operator the license or approving any additional service at any time.<sup>173</sup> Nevertheless. Since the NTRA has no direct power over price setting, the four operators in the market started to compete in prices and quality of service.<sup>174</sup> From 2002 and till 2011, due to competition pressure, the prices of the telecommunication services in Egypt decreased by 60%.<sup>175</sup> Furthermore, facilitating the entry of competition

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<sup>172</sup> See, Amirah El-Haddad, *supra* note 157, at 2.

<sup>173</sup> See, *id.*

<sup>174</sup> *Id.*

<sup>175</sup> *Id.*, at 8.

in the market improved the quality of service, with regards to the mobile broadband services, through better coverage and developed networks.<sup>176</sup>

## 2. Quality of service and consumer freedom to access content

Lack of competition, with regards to ADSL services, did not affect the quality of service to a huge extent. Although, all operators have to lease the infrastructure from TE, TE still had to improve and develop its ADSL network due to the increasing demand. Over the years, TE worked on developing its network, but it failed to cope with the development of telecommunications around the world. Which made Egypt among the lowest ranked states in terms of internet speed. It is frequently argued though that “[t]he internet market in Egypt has several adverse characteristics. First, behavioural practices in this market are unethical, with many people sharing the cost of one line. Second, only a small segment of the market values extremely high internet speed comparable to that experienced in developed countries.”<sup>177</sup> In practice, it seems to the contrary, one of the most shared complains of the consumers is the speed and quality of the internet. Since TE Data controls over 75% of the market, it became one of the most trending jokes on social media. Joking about how bad the quality of service is, is not limited to TE. Technically, any other operator will not be able to provide a better or faster internet, since it is only reselling the service it leased from TE. However, the control of the market made the consumers focus on TE Data alone. Also, the fact that, the customer support services provided by all other operators is much better than that of TE Data.

To improve the quality of service in Egypt, it is important to introduce competition in building and developing the infrastructure, as previously mentioned. It may be hard with regards to already populated areas in Egypt and most probably will not attract investments due to TE’s “first move advantage”. However, it is much easier in new areas that are currently under constructions, as the New Capital, New Cairo or the 6<sup>th</sup> of October. Network efficiency, as stated earlier, is not the only factor that affects the quality of services. The availability of content and consumer freedom to access such content is core spirit of the internet.

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<sup>176</sup> See also, *id.*, at 16.

<sup>177</sup> Amirah El-Haddad, *supra* note 157, at 15.

In Egypt “[a] growing number of websites were reportedly blocked in the past year, including independent news outlets, human rights organizations, VPN and proxy services, and social media platforms. Incidents of content removals also increased without any transparency behind censorship decisions.”<sup>178</sup> Additionally, although the NTRA denies any blocking of VoIP applications,<sup>179</sup> a number of VoIP applications gets blocked from time to time, such as WhatsApp calls and Skype.<sup>180</sup> Currently WhatsApp call are blocked by all operators in Egypt. Blocking such content or making them available depends on national security reasons.<sup>181</sup> Nevertheless, recently, the parliament issued the Cybercrimes law no. 175 of 2018. The Cybercrimes law establishes certain rules and procedures for blocking content.

Article 7 of the Egyptian Cybercrimes Law states that: For the competent investigation authority, when enough evidences are available, that a website, whether being broadcasted from within the state or from abroad, is engaged in the distribution of statements, numbers, pictures, films, advertising material or any similar content that is considered a crime in accordance to this law and/or poses a threat to national security or expose the national security or the economy of the state to threats, to issue a banning order of such website as technically possible.

The competent investigation authority shall submit its banning order to the competent court, in a counselling room session, within 24 hours along with a memorandum of its opinion. The competent court shall issue its elaborated decision on the order, whether in approval or rejection, within 24 hours.

In the events of emergencies that constitute an immediate harm or harm that is about to fall, the competent investigation and executive authorities shall report to the NTRA, where the NTRA shall notify the service provider to temporarily block the website, content, platform or links mentioned in paragraph 1 of this article. The service provider must immediately execute the order specified in the notification once delivered to it...

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<sup>178</sup> Freedom House, *Freedom on the Net 2018 - Egypt*, 1 November 2018, available at: <https://www.refworld.org/docid/5be16b1c4.html> [last accessed on Jan. 21, 2020].

<sup>179</sup> CRPCEgyofficial, Twitter, available at: <https://twitter.com/CRPCEgyofficial/status/855539461899288581> [last accessed on Jan. 21, 2020].

<sup>180</sup> This is based on personal, family and friends experiences, as well as it is well known in Egypt that VoIP applications such as Skype, Facetime, WhatsApp calls, Facebook calls...etc do not constantly work. They are usually either blocked for all broadband users around Egypt or available for all broad broadband users around Egypt regardless of the ISP.

<sup>181</sup> See, Freedom House, *Supra* note 178.

The issuance of a Cybercrimes law with such detailed rules and procedures for blocking content is a well thought of and implemented step in modernizing and making telecom regulations clearer. Whether one agrees or disagrees with the reasons of blocking content, Egypt finally has regulations determining lawful and unlawful content.

On the other hand, vertical integration is becoming recently popular in Egypt, imposing a major threat to the freedom of consumers to access content as well as threats pertaining innovation. Etisalat Misr lately issued its new “Entertainment Corner”.<sup>182</sup> “Etisalat Entertainment corner is your one stop shop for all entertainment content.”<sup>183</sup> It’s a group of applications that both provide content and services. Such as Etisalat Music for streaming music content, Etisalat games and Etisalat Cash for financial services such as money transfers and bills payments. Similarly, Orange Egypt has its own music streaming and financial service application.<sup>184</sup> “Ghaneely is a music application that grants you access to all new and exclusive content.”<sup>185</sup> While Orange Cash is a financial services application for money transfer and bills payment.<sup>186</sup> It is important to note that Zero rating and blocking of competition content have not been witnessed in Egypt yet. The Egyptian market has a number of competing start-up CPs. Thus, it is important for the regulator in Egypt to start addressing the issue of vertical integration before ISPs begins to get engage in discrimination practices that will both harm the consumer and competition.

In conclusion, the telecommunication regulations in Egypt by applying net neutrality obligations will have insured competition between CPs. Competing CPs will benefit the consumers, by giving them more choices with regards of content availability and variety. Competition between CPs will provoke innovation bringing more ideas in the market which will enhance the core spirit of the internet making it even more popular.

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<sup>182</sup> See, Etisalat, *Entertainment Corner*, available at:

[http://www.etisalat.eg/etisalat/portal/entertainment\\_corner\\_en](http://www.etisalat.eg/etisalat/portal/entertainment_corner_en) [last accessed on Jan. 21, 2020].

<sup>183</sup> *Id.*

<sup>184</sup> See, Orange, *Entertainment*, available at: <https://www.orange.eg/en/entertainment/mobile-apps/> [last accessed on Jan. 21, 2020].

<sup>185</sup> *Id.*

<sup>186</sup> *Id.*



## **Conclusion**

In conclusion, this paper revolved around the possibility of implementing net neutrality obligations in the Egyptian Telecommunication regulations, as well as, fitting those obligations in a way that best achieves consumer welfare. In order to address this possibility, identifying the nature of both the internet and net neutrality obligations as well as consumer welfare had to be determined. Chapter I presented a background on the open internet/internet freedom notion. It gave a brief insight on the contradicting regulatory approaches regarding the nature of the internet, whether the internet is regulated as a public utility or a private property. Chapter I, also went through the debate around net neutrality and all claims, with and against it, put forth by both ISPs and CPs. It mainly highlighted that ISPs and CPs are more concerned with their economic interests rather than consumer welfare, as they claim through their announcements and published opinions.

Chapter II of this paper focused on consumer welfare. It argued that consumer welfare, with regards to internet services, are based on three factors namely: prices, quality of service, and freedom to access content. Although, maybe the price is considered a factor on its own, quality of services and freedom access content are co-dependent; one cannot exist without the other. Accordingly, neither ISPs nor CPs can claim that either is providing a service to the other that requires any sort of payment, judging by the fact that the ISPs network will be useless without the content provided by CPs and similarly, CPs will never be able to reach their audience without the network developed and operated by ISPs. Furthermore, chapter II highlighted the manipulative practices of ISPs that threatens the existence of the internet as we know it. Those threats includes distortion of competition and price manipulation through the vertical integration of ISPs into content providing services. This chapter proposed that net neutrality obligations will have a positive effect on consumer welfare by limiting ISPs control over the network to only the efficient allocation of data capacity. Since, CPs have no motive to use the network efficiently, and since CPs have been using congestion control techniques that puts unnecessary additional traffic on the network, ISPs had to be given right to control the

data traffic, subject to strict restrictions, for optimal network efficiency. Finally, this chapter stressed on three practices that ISPs should steer clear from, which are blocking, throttling, and paid prioritization according to the rules of net neutrality.

After articulating the debate and highlighting the basic rules of net neutrality and its impact on consumer welfare, chapter III provided an implementation strategy for net neutrality obligations into the Egyptian telecom regulations for the optimal benefit of consumers. This last chapter recommends that the Egyptian telecommunication regulator should focus on establishing a safe environment for CPs to compete and reach their audiences. In order to do so, the regulator has to move the Egyptian telecom market from a non-neutral one to a neutral one by restricting ISPs control over their networks through strictly applying the three prohibited practices, to avoid distortion of competition.

One more step is necessary for properly regulating internet access services, which is identifying the nature of internet. Internet is the developed version of communications. In certain countries, such as Egypt, it inherited the nature of the telephone which is being a public utility, while in other countries it took a more liberal nature during the era of privatization. Being one or the other directly affect the implementation of the net neutrality obligations. From my perspective, net neutrality obligations leans more towards considering internet access services of a public utility nature. Net neutrality obligations mainly aim to restrict the control of the ISPs over the network, since at this point of time, internet is an essential utility used in all entities whether educational, governmental, cooperate or banking for example, that accommodate poor service. Thus, minimum required standard for network efficiency is essential, as well as, consumers' right for continuation of service under strict regulations. However, further studying and analysis is required to determine the impact of categorizing internet as an access service or an utility on consumer welfare.

“In light of the rapid and ongoing growth of the ICT sector, developing policies and regulations related to modern technologies is a strategic national priority. The importance of determining and adopting the right policies stems from the need to establish the foundations, mechanisms and procedures through which strategies can be successfully implemented,

with close attention to protecting the interests of individuals and society, and identifying users' duties and responsibilities.”<sup>187</sup>

Policies is the starting point to preserve the nature of the internet and safeguard consumers rights against the clashing interests of the service providers. “Communications regulators over the next decade will spend increasing time on conflicts between the private interests of broadband providers and the public’s interest in a competitive innovation environment centered on the Internet.” Tim Wu. Regardless of whether the government considers the internet as a public utility or an information services, governments acknowledge the essentialness of the internet through the steps and efforts taken to increase its deployment. However, deployment on its own will not achieve the intended purpose. The regulator should encourage the service providers to provide consumers with discounted prices, while preserving minimum quality standards and constant network development. Furthermore, giving ISPs the authority to discrimination between the data traffic, beside on its type, for the sole purpose of proper allocation of capacity should further ensure network efficiency. In Egypt, eMisr National Broadband Plan is an outstanding step to ensure consumer welfare in terms of internet access and quality of service. However, reduced prices and availability and accessibility of content still needs consideration.

In conclusion, net neutrality or the open internet notion aims to preserve the nature of the internet. The internet is a safe platform that encourages innovation, investment and freedom of expression. Such a nature has made consumers during the past decade, increasingly, addicted to the internet. The number of consumers are in constant increase as well as the usage of the already existing ones. In certain markets CPs yield power over the regulator through directing the public opinion, like in the United States. While, in other markets, ISPs may have power over the regulator due to the government’s need for investors, national or foreign, like in Egypt. At the end of the day, regardless of which market is in question, the regulator’s main focus should remain on the consumer. Net neutrality is a brilliant concept that should be adopted by all regulators worldwide.

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<sup>187</sup> ICT Strategy 2012 – 2017. 36-37

However, each market regulator should implement such obligations in a way that best fits its structure and its consumers best interest.