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Advancing the Egyptian Public Broadcaster to Compete in the Digital Era

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Advancing the Egyptian Public Broadcaster to Compete in the Digital Era

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By

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Abstract

In light of the dramatic technological developments the media industry is witnessing in Egypt and the region, the Egyptian public broadcaster seems missing from the scene. While many privately owned channels are offering some form of online catch-up service, the first Egyptian broadcaster is still very weak online with some presence on YouTube that does not meet the opportunities other broadcasters are benefiting from in the region as well as globally.

Through a series of in-depth interviews, the study aims at closely examining the strengths and weaknesses of the current digital presence of the Egyptian public broadcaster and providing recommendations on how it can be enabled to compete with privately owned competitors. Having the legacy in the realm of linear TV in the Middle East and currently undergoing a renovation process in terms of content that is planned strongly compete within the upcoming period, a strong digital presence is a must and a key factor to succeeding in reaching such a goal. The study will identify the different formats and business models for existing competition and formulate the digital strategy that would best suit the current state of the public broadcaster.

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Chapter 1: Introduction

1.1 Background

Since the first transmitted TV picture more than sixty years ago, TV has rightfully occupied the throne of the media industry as the most attractive medium with its vivid images and storytelling capabilities that far exceeds any of its competitors everywhere in the world. For Egypt, it was not a different case, due to the high illiteracy rates and the government's adoption of an ambitious project to establish its own broadcasting service that transmitted its first images in 1960, later under the Egyptian Radio and Television Union in 1970. Since then, broadcast media was controlled by the government for several decades. Knowing the importance of its reach and effects, the successive rulers of Egypt held a tight grip over this powerful medium with some differences over the past 40 years up until the early 2000s. Under Nasser's rule, television was used as a propaganda tool to promote the socialist ideas of the regime and mobilize the masses for support (Guyaabess, 2013). The 1970s and 80s witnessed a gradual change in the content offered, along with a growing reach for terrestrial channels, reaching up to 98% by the end of the 1970s (qtd. in Guyaabess, 2013).

The rise of satellite channels regionally and the launch of Nilesat locally in the 1990s marked an important phase in the TV landscape in the Middle East, and more importantly for Egypt. "Satellite television exposed audiences to a greater plurality of voices than had been previously been aired on state television, including views and information that contradicted the "official" line" (Buccianti and el-Richani,2015). However, the media scene in general and state run television channels in particular remained under tight control from the government, which used different tools such as censorship and arbitrary editing to filter the messages going through

to the Egyptian audience. In her book, Guyaabess explains that this role was primarily led by what the opposition parties called "the gatekeepers" of the National Democratic Party (NDP) (2013). The other factor that further disrupted this system, was the emergence of Internet access in Egypt starting in 1993, opening up a totally new space for people not only to get exposed to different views but also to express their own, which will be discussed in further detail later in this paper. Up until the Jan 25th revolution in 2011, traditional Egyptian media remained under control of the state, coupled with what Vartanova described as "traditional neglect of the market driven logic and the 'grassroots' societal initiatives [and] 'top-to-bottom' media policy" (qtd. in ElShaer,2015). The situation clearly changed since 2011 on the broadcast level. The number of TV channels increased from 1,096 to 1,294, with ERTU operating only 23 of them, divided between terrestrial and satellite channels (Buccianti and el-Richani,2015; ElShaer, 2015). ElShaer sees it as a "a shift away from a monolithic media landscape toward a more pluralistic one (2015).

The Internet did not compete with TV in terms of the nature of the medium until 2005 with the introduction of YouTube. Blogging had started to gain popularity a little earlier and kept growing steadily reaching 40,000 by the end of 2010 (qtd. in Arif, 2014), a strong indicator of how audiences -who were more passive and receptive one day- are much more active in finding a way to express themselves and have a wider reach further than their social networks. With the rise of the concept of citizen journalism, YouTube, being the second largest search engine worldwide, not only provided access to videos on the searched topic from around the world, but also allowed Arab and Egyptian youth to "become producers of their own narratives" (Arif, 2014). Green and Jenkins explain further that "audiences play an active role in 'spreading'

content: their choices, their investments, and their actions determine what gets valued" (qtd. in Arif, 2014).

But, YouTube was not only a platform for individuals to broadcast their ideas and views, but also another platform for TV channels in Egypt to compete on and generate revenues from. In her study on the development of YouTube, Holland explains that Google's move to acquire YouTube in 2006, the website was transformed "from a site where amateur and ad-free videos were posted to an online destination that is now consumed by commercialized and professional videos." Today, most of the privately owned free-to-air satellite channels have their own YouTube channels, with all of their content digitized, archived and easily accessible online at any time. In addition, pay TV services in the region have established their own online catch-up services, offering digital libraries of their content accessible at no extra cost for all their subscribers. The competition for watch time and audience attention is not limited to TV channels and originally linear content. In the past five years, the MENA region has witnessed the entry of new players, widely known as the OTTs (Over-The-Top), who provide digitally exclusive content through an ad-free subscriber based model. A study on Pay TV in the Middle East and North Africa conducted in 2016 highlights a shift in viewing patterns amongst audiences in the region, supported by the younger half of the society that is under 30 years of age (*"Pay TV in Mena…, 2016)*. The advancement in communications and the availability of smartphones at affordable prices for many has increased demand for online content that can be watched on mobile devices (*"Pay TV in Mena…, 2016).* A recent report produced by Hootsuite in 2018, shows that 41% of web traffic comes from mobile devices, with a 33% year-on-year growth ("Digital in 2018..."). Figure 1 below, in addition to the statistic that there are 49.23 million internet users in Egypt, indicates the huge opportunity that lies on digital platforms for media and

content to be consumed. The report also shows that internet users in Egypt spend a daily average of three hours of their internet activity on social media platforms in a clear indication of how integral it has become in people's lives (ibid).
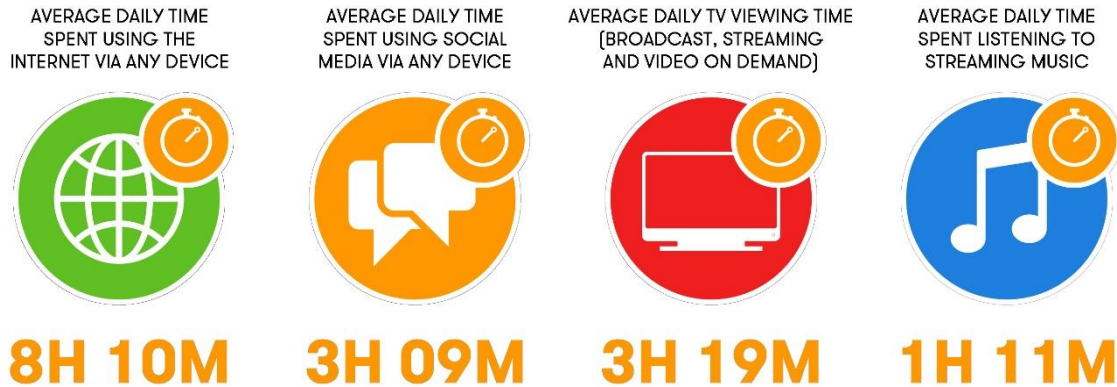
Source: Globalwebindex, Q2& Q3 2017, based on a survey of internet users aged 16-64

Figure 1 - Online consumption of social media and content in Egypt

A key factor that is still untapped in the region is IPTV with triple-play services that add telecom operators into the competition over eyeballs. However, such competition would remain in the main cities with the most advanced infrastructure that can support such services (*"Pay TV in Mena…, 2016)*.

1.2 Statement of the Problem

Amid all the aforementioned momentum the media industry is witnessing in Egypt and the region, the Egyptian public broadcaster seems missing from the scene. While many privately owned channels are offering some form of online catch-up service, the first Egyptian broadcaster is still very weak online with some presence on YouTube that does not meet the opportunities other broadcasters are benefiting from in the region as well as globally. The National Media

Authority (NMA) with its different entities and channels do exist on YouTube, but a lot of problems can be noticed across the channels. A lot of duplication in channel types was found, for example within the news genre, there are three channels namely "Nile News," "Egypt's News Center," and "Akhbar Mspero," with actual duplications in video content. Each channel was created on a different date between 2013 and 2015. A channel named "Ettihad Al Ezaa Wal Television" is supposedly publishing a collection of all programs produced by ERTU, however several shows have created their own channels, distributing the number of views and subscribers, and hence the potential channels strength and revenue. Regardless of the quality of the content provided, the videos and/or episodes are not uploaded on a regular basis and would be hard to find with simple keyword search. Accordingly, a serious issue can be easily tracked looking at the performance of Egyptian public broadcaster on the digital platforms, giving a lot of room for improvement and making a strategic change imperative for the public broadcaster to regain its status in Egypt and claim a spot in the new content world that was created in its absence. Not only is the public broadcaster missing on potential revenues that are tied with the necessity of good content, but it is also lacking an organized digital archive that is accessible to everyone and puts it on par even with its local free-to-air privately owned competitors. In addition, a lot of the content owned and/or produced by the Egyptian public broadcaster can be found on other unofficial channels that are illegally monetizing on the content and gaining a subscriber base based on that.

1.3 Purpose of the Study

The study is a descriptive research that aims at closely examining the strengths and weaknesses of the current digital presence of the Egyptian public broadcaster and providing recommendations on how it can be enabled to compete with privately owned competitors.

Having the legacy in the realm of linear TV in the Middle East and currently undergoing a renovation process in terms of content that is planned strongly compete within the upcoming period, a strong digital presence is a must and a key factor to succeeding in reaching such a goal. Constructing a roadmap for the NMA on digital platforms will not only help protect its copyrights, but will also open a new revenue stream for the indebted institution and reach new audiences, who do not watch linear television anymore, through OTT services. The study will identify the different formats and business models for existing competition and formulate the digital strategy that would best suit the current state of the public broadcaster. Accordingly, the study aims to answer the following *research questions*:

RQ1: Does the public broadcaster possess the different success factors needed to compete in the digital era (technology, content, infrastructure)?

RQ2: How can the public broadcaster have a solid opportunity in competing in the digital era with privately owned competitors?

RQ3: Which model of digital video service should the public broadcaster adopt?

Chapter 2: Literature Review

2.1 The Public Service Broadcasting Concept

The origins of public broadcasting can be traced back to the UK's history of radio broadcasting. After World War I ended in 1918, both the government and manufacturers of radio sets for the military saw an opportunity in broadcasting for the masses (O'Mahen, 2013). The British government created a monopoly through giving one broadcasting license to the British Broadcasting Corporation that started as a private company in its early days. The "public service" was partially funded by a radio fee collected from all those who own a radio set (O'Mahen, 2013). This strategy is the basis of today's public service broadcasters' model in many countries around the world.

However, a 2001 report by the World Radio and Television Council (WRTC) and the United Nations Education, Scientific and Cultural Organization (UNESCO), stresses on the importance to differentiate between a state- and a public broadcaster. In many countries such as the above mentioned example of the UK, the state broadcaster has evolved into a public service broadcaster, where the media organization is bound to a legal framework put by the government, yet enjoys autonomy from the state, freeing it from any potential interference from the state in terms of editorial policy and content ("Supporting Public Broadcasting…," 2004). With the state broadcaster, the organization is under direct government supervision and is thus a communications tool through which the state disseminates its messages and policies to the audience. Another main differentiator between both models is the funding. While the state broadcaster depends mainly on tax funding, the public broadcaster receives most of its funding from a license fee -willingly paid by the viewers- and in some countries might also have a

government subsidy and/or some advertisements (Allam, 2017). But the majority of public broadcasters around the world do not have this dependency to advertising revenues such as the commercial models derived from the United States' historical development of the media market (O'Mahen, 2013).

The WRTC and UNESCO report also defines the public broadcaster as an "an information and education tool, accessible to all and meant for all," clearly differentiating its mission from that of commercial broadcasters (2001). Other characteristics of the public service broadcaster, says the report, are diversity and uniqueness of content provided (Public Broadcasting; Why…, 2001). Believed to be a "cornerstone for democracy," public broadcasters are non-partisan and and independent from the state in general or any government in particular, making the funding and legal framework key for their unbiased and impartial status (Allam, 2017). Still, Allam points out that many of the public broadcasters in the modern and development societies "still depend on government mechanisms to collect license fees," which still ties them financially to the governments who created them in the early 20th century (2017). She also sees that public service broadcasting "usually faces an identity crisis" as it struggles to deliver on its principles of universality, diversity, independence and distinctiveness, while it also has to compete with other commercial or privately owned broadcasters on the market. (Allam, 2017). A report by the UNDP in 2004 argues that as much as a public broadcasting service is an integral part of the promotion and maintenance of a democratic society, it cannot play that role in a country where a democratic system is in place. It works, the report states, with the "same pace as the democratic evolution of a society" ("Supporting Public Broadcasting…," 2004).

Though public broadcasters are usually created and governed through state laws derived from the constitution that protect their independence and impartiality, the reality is a little different. The modernization and evolvement from a state broadcaster into a true public service broadcaster has not been the same in all countries. While the French public broadcaster still relies in part on government subsidies, the Swedish public radio service excluded the government out of its collection system for the license fees (Allam, 2017; Sehl, 2016). Still, such developed countries have legislative ways to hold public broadcasters accountable and under financial monitoring to keep spending of public funds transparent (Allam, 2017). Below, different public broadcasters in countries of varied political and economic development are highlighted.

2.1.1 Public Broadcasting the United Kingdom

As mentioned in the previous section, the world's first and most notable public broadcaster was established in the United Kingdom, namely the BBC. Sterling describes it as "most important and widely listened to broadcaster in the world" (2008). Starting as a business deal between the government and radio sets' manufacturers, the BBC was established in 1922 as a private company, with a guaranteed monopoly in the UK market. This was due to the fact that the British government controlled the spectrum and thus the granting of any broadcasting licenses (O'Mahen, 2013). O'Mahen notes that this limitation "shielded the fledging British Broadcasting Company from competition" (p.49, 2013). This situation changed in 1955 when the government allowed commercial television (Sterling, 2008).

The business model of the BBC started with a broadcasting fee, in addition to a tax that was collected on radio set sales and the sales of the company stocks (O'Mahen, 2013). Within

only one year the BBC witnessed great success that drove the government to form a commission known as the Sykes commission in 1923 to study the "broadcasting market" and accordingly recommend the BBC's role in it (O'Mahen, p.50, 2013). According to the commission's report as well as another report by the Crawford Committee in 1925, "the government bought the company's shares and transformed it into a public corporation - the British Broadcasting Corporation (BBC)" ("Radio, Television and the BBC," n.d.). The BBC was formally established as a public broadcaster according to a Royal Charter in 1927, which states how the corporation functions and is governed ("BBC Royal Charter…," n.d.). Today, the public broadcasting license fee is still being collected on a yearly basis and amounts to around 200\$, which includes access to its online video platform *iplayer* (Jackson, 2016).

2.1.2 Public Broadcasting in France

Broadcasting in France started with radio broadcasting in 1921 with "Radio-Tour Eiffel" a state-owned radio channel, only to be followed by a privately owned radio channel named Radio-Paris one year later (Kuhn, 2011). Following World War II, politicians realized the power of radio where different radio stations had contradicting political stances during the war, and thus, private radio stations were nationalized after the war (Tremblay, 2016). Kuhn explains that these legislations enforced "a state monopoly with public service goals," which was also applied to television broadcasting at the same time (2011). "The Radiodiffusion francaise (RDF) was created in 1945, which was restructured to be the "Office de radiodiffusion-television francaise (ORTF) in 1964" (Tremblay, 2016, p.194).

Despite the early establishment of television broadcasting in France in 1936, its growth was very slow compared to radio, first due to World War II, and second due to slow purchasing

rate of television sets. In the early 1960s, only 20% "of French households had a television set" (Kuhn, 2011). This changed in the following years, which was met by a growth in the number of state-owned television channels during the 1960s. The tight grip over public broadcasting witnessed a change in 1974 when the decision was made to convert the ORTF to seven companies, one for each channel, in an attempt to encourage quality based competition between channels, as well as to achieve "political independence" (Vedel, 2009, p.262). With the introduction of privately owned channels in the 1980s, the broadcasting scene kept evolving, but with public channels holding their grounds in terms of market share. The 2015 Yearbook of the European Audiovisual Observatory shows that the French public channels control around 30% of viewership in France (Sehl, Cornia, & Nielsen, 2016).

Today, France's public broadcaster has two entities namely for television and radio respectively, which are funded by 70% from a yearly public license fee, 8% from advertising, 7% from public funding, "and the rest is listed as "sponsorship and other"" ("How public service…", 2015).

2.1.3 Public Broadcasting in Germany

The German broadcasting service started in 1935, with claims of being the "world's first television service" before the UK (McLean, 2018). After the end of World War II, the Allies took over the radio stations and allowed the press according to certain censorship guidelines (Czepek, Hellwig & Nowak, 2009). They drew a clear framework for the German broadcasting system that was focused on decentralization and pluralism. The model was derived from that of the BBC, except for the decentralization part (ibid.). Accordingly, the radio stations were handed

back to the German government to abide by the new system, which is still the basis of the broadcasting system that functions today.

In 1950, the public broadcasting channels across Germany's states founded the Arbeitsgemeinschaft öffentlich-rechtlicher Rundfunkanstalten der Bundesrepublik Deutschland (ARD), which is the basis of the ARD channel and das Erste, still functioning till today, along with ZDF, which was founded in 1963 (Sehl, Cornia, & Nielsen, 2016; Czepek, Hellwig & Nowak, 2009). In addition, there is DeutschlandRadio, the public radio broadcaster and DW, the world news service. All of the abovementioned channels have their respective regional television and radio channels (Sehl, Cornia, & Nielsen, 2016). Both a broadcasting council and an administrative council govern the public broadcasters. The broadcasting council is responsible for content, while the administrative council "is elected by the broadcasting council and supervises finances" (Czepek, Hellwig & Nowak, 2009, p.235).

Since 2013, all households are obliged to pay an annual broadcasting fee, defined more as "broadcast contribution" ("How public service…", 2015). Before that, there was a radio and television fee that was payable per device and required "an army of inspectors" for monitoring and fee collection, which is why the fee is now a flat rate that applies to everyone ("How public service…", 2015). The fee is one of the highest for public broadcasters in the world, generating an annual revenue of over eight billion USD, in addition to advertising revenues that together constitute "one of the largest public service budgets in the world" (Sehl, Cornia, & Nielsen, 2016, p15).

2.1.4 Public Broadcasting in the United States

In the United States, which started its broadcasting system in a much more commercial model, the need for a public broadcasting institution and model to shadow the commercial one arose in the early 1900s. After World War I, some educational and university radio stations started airing but struggled a lot with both audience retention and finances forcing them to give up their license to commercial broadcasters (Waldman, 2011). Supported by the Federal Communications Commission, educational television and radio broadcasting survived until the 1960s when the Carnegie Commission on Educational Television issued a report calling for changes in the system in which public television operates through both increased federal support and "the establishment of a private corporation that would coordinate public broadcasting operations" (Waldman, 2011). This marked the establishment of the Corporation for the Public Broadcasting (CPB), out of which came two of the most well-known US broadcasters namely Public Broadcasting Service (PBS) and National Public Radio (NPR). Here, a different business model is in place where the public broadcasters' funding comes from a different array of sources with the majority coming from non-governmental parties such as individual subscribers, universities, foundation grants, and private businesses (Waldman, 2011). Still, there is funding from the Federal government and local governments involved but is a minority (Allam, 2017).

2.1.5 Public Broadcasting in India

In India, public broadcasting had a similar start to that of the United Kingdom, starting with a radio service in 1923 that depended mainly on a license fee for funding (Mohapatra & Das, 2014). However, in the 1930s, the Indian Broadcasting Company "came under the direct

control of the government in the Department of Labor and Industries" under the name of Indian State Broadcasting Service (Mohapatra & Das, 2014). The service, later named *All India Radio*, remained part of the government after India's independence in 1941 and is - along with Doordarshan, the television broadcasting service- still under control from the government (Mohapatra & Das, 2014). There were several attempts to restructure the public broadcasting institution to give it more constitutional and financial autonomy from the government, but it was only in 1990 when the Prasar Bharati Act was passed by the parliament and enforced by 1997 (Mohapatra & Das, 2014). Similar to the recent Egyptian model, the Act gave autonomy to Psarar Bharati through the way its board members were chosen, with only three of 15 members who were former members of the government or representatives of the government (Mohapatra & Das, 2014). However, the rest of the members "were to nominated by the president on recommendation of Chairman of the Council of States and the Press Council of India," keeping the public broadcaster under relative control by institutions and individuals loyal to the state. (Mohapatra & Das, 2014). The Chief Executive Officer of Prasar Bharati was always chosen from members of the Indian Administrative Service (IAS), with the exception of the current CEO Shashi Shekhar Vempati (Ahluwalia, 2017). This move was received as a sign of the implementation of a previously proposed plan to "corporatize" both television and radio entities in order to reduce their dependence on public funds and thus achieving autonomy (Ahluwalia, 2017). Today, Prasar Bharati is the largest public broadcaster in the world in terms of volume, with "67 television studios and 420 radio stations" (Raha, 2018). The funding model currently depends on the central government, in addition to some advertising on the increasing commercial content that has been part of Prasar Bharati's programming in recent years (Raha, 2018).

2.1.6 Public Broadcasting in Japan

Japan's broadcasting history started with the Tokyo Broadcasting Station, a radio station that started transmission for the first time in 1925 (NHK World, 2017). After World War II, a broadcast law was issued in 1950 that set the foundation for the establishment of both the public service broadcaster as well as commercial broadcasting (Nakamura, 2013). Accordingly, Nippon Hoso Kyokai (NHK) was established as Japan's public broadcaster (NHK World, 2017). The main objective of NHK was to reach "all over Japan for the public welfare" while the purpose of establishing commercial broadcasters was to give equal opportunities on the market "and maximise the freedom of expression through broadcasting" (Nakamura, 2013). Since then and until today, the NHK functions though a financial model that depends on a license fee by 95% (Kashimada, 2018). The government subsidy substitutes the rest, which is intended to fund international broadcasting of NHK World, a public diplomacy tool for Japan (Yoshiko, 2010). The fee is collected from all Japanese households and businesses with receivers through NHK staff who go "door-to-door" to ensure registration and payment (Hornyak, 2017). The monthly fee for the terrestrial service is around 12$, while the satellite one is around 21$ (Kashimada, 2018). Accordingly, NHK has a very strict policy towards advertising that is completely forbidden on its channels and stations (Kashimada, 2018). NHK broadcasts have a 30% market share, while the rest is occupied by 127 commercial stations (Kashimada, 2018).

2.1.7 Public Broadcasting in Turkey

The Turkish Radio and Television (TRT) was established in 1964 by a law that confirmed its independence in all aspects and a mission to inform and educate rather than a

profit-oriented institution (Gül, 2011). Its first broadcast began four years later and started with a range of programs that fulfilled the above stated mission. There were also some German, French and British programs, indicating the influence those countries had on TRT's model and technology learning (Unur, 2016). Unur notes that TRT was used to spread the republican ideals through both its programming and its coverage of national events and holiday celebrations of the Turkish nation (2016). Since then, the public broadcaster was criticized for being a state broadcaster rather than a public one, especially after a constitutional amendment in 1972 that omitted the clear definition of the autonomy of the institution and rather defined it as "impartial" (Gül, 2011). This was further reinforced after the 1980 military coup which resulted in a new constitution in 1982 that had the same definition for TRT (Gül, 2011). TRT's new director was a retired military man who came with the mission to "unify" the Turkish people again and hence, the institution and its broadcasts reached an even higher level of control and censorship (Unur, 2016).

Despite the election of a new prime minister -Turgut Özal- in 1983 and the end of the military era, TRT remained under strict control, leading it to become an "aploitical" broadcaster that aired mostly entertainment as well "cartoons and foreign dramas" (Unur, 2016). Unur explains how the public broadcaster could not catch up with the rapid economic and social developments that took place in Turkey due to the openness policies Özal introduced (2016). The decline in popularity was accelerated with the launch of the first privately owned satellite channel in 1990. The channel aired via satellite from Germany exploiting a loophole in the Turkish constitution that gave monopoly to TRT, yet did not put any regulations for broadcasting from outside Turkey (Gül, 2011; Unur, 2016). After the legalization of the status of privately owned channels in 1994, the market was flooded with commercial channels that were mainly

owned by giant conglomerates and business corporations, in addition to religious channels that claimed the role of civic agents that maintained the true Islamic identity (Unur, 2016). The law legalizing the status of privately owned channels also established the Radio and Television Supreme Council (RTÜK), which became the regulatory authority to grant licenses and frequencies as well as monitor all broadcast channels to ensure their abidance to the law (Gül, 2011).

TRT's financial model depends on three revenue sources. The first is a 2% tax added to the electricity bill, which constitutes the majority of its income (Rövekamp, 2014). Another tax is collected from the "sales of radio and television receivers" and in 2009 accounted for around 30% of the revenues (Tunç and Görgülü, 2012). The remaining minority of the revenue comes from advertising as well as TRT's international broadcast services (Tunç and Görgülü, 2012).

Despite several attempts to regulate the media scene in Turkey and prevent it from being controlled by a limited number of conglomerates, ownership remains within a handful of business corporations (Gül, 2011). TRT underwent a modernization plan for its "technical infrastructure to meet EU digitization standards and broadcasting requirements," yet it failed to retain its market share due to its clear bias towards the state and the ruling party. (Tunc, 2018). In 2010 the public broadcaster's market share dropped to 3.3% and by 2011, advertising revenues have dropped by 50% (Gül, 2011; Rövekamp, 2014). In addition, many of the experienced calibers of TRT left to the privately owned channels throughout the years, leaving the public broadcaster struggling to compete (Gül, 2011).

	France	Germany	Japan	India
	radio 1921, television 1936	radio 1923, television 1935	radio 1925, television in 1950	radio 1923, television 1959
	70% from a yearly public license fee, 8% from advertising, 7% from public funding	public broadcasting fee and advertising	95% public license fee, government subsidy substitutes the rest, which is intended to fund international broadcasting of NHK World	depends on the central government, in addition to some advertising
	200$	~250$	396$ for both terrestrial and satellite	no
	separate website for each channel, all offering a catch-up service Premium content such as movies and series can also be broadcasting fee	VOD	VOD	YouTube
		broadcasting fee	for an extra fee	free of charge

2013; "How public service...", 2015; Sehl, Cornia, & Nielsen, 2016; Allam, 2017; Waldman, 2011; NHK World License..., n.d.; Koc-Michalska, & Vedel, 2013

Figure 2- Public broadcasters around the world

2.2 The Egyptian Public Broadcaster

2.2.1 The Beginnings

As much as Egyptian TV has always been positioned as a leader in the Arab world, it was not the first one in the region to launch. The first official broadcasting images were aired by the government of Iraq in 1956, followed by a number of privately launched broadcasts in Saudi Arabia in 1957 by Aramco and in Kuwait during the same year (Abdel Hay, 2012). As for Egypt, it launched its first broadcast in July 1960 on the occasion of celebrating the 1952 revolution (Abdel Hay, 2012). Literature shows that launching a television station was planned for long before that as early as 1947, but the first official plans for it were in 1954 when the project to establish a television and radio station was approved and serious steps were taken to commence with the project (Al-Ganainy, 2015). However, the plans were interrupted due to the 1956

aggression on Egypt, slowing down the progress on this ambitious project. The project was finally revived in 1959, and within a short period of time, less than a year later, the first broadcast images were transmitted with President Abdel Nasser's speech to the parliament on July 21st, 1960 (Al-Ganainy,2015). The Egyptian television was completely managed by the government, namely through the Egyptian Broadcasting Authority and under the umbrella of the Ministry of Culture and National Guidance (Abdel-Baky, 2015). The channel started with six hours of programming, then soon with the addition of a second TV channel the total airing time increased to 13 hours a day (Al-Ganainy, 2015). Television was considered a powerful tool to continue spreading Nasser's ideas in what could be considered as a second mouthpiece after what the regime did with radio in Sawt Al Arab (Abdel Hay, 2012). With high illiteracy rates, both media play a very important role in informing the people, spreading ideas, and influencing public opinion (Amin, n.d.). As with Sawt Al Arab radio service, the Egyptian public broadcaster quickly gained popularity and rightfully occupied leadership of the television industry in the Arab world, as the state was committed to investing in content production, backed up by its understanding of the medium's importance as both a political and cultural tool of influence (Abdulla, 2014). Having an already established film industry enabled the state to produce high-quality content depending on local calibers, which no Arab counterpart could compete with (Boyd, 1999). Up until the signing of the 1979 peace treaty with Israel, Egyptian production secured hard currency for the state, being sold consistently to all Arab television broadcasters in the region (Boyd, 1999).

The Egyptian Radio and Television Union ERTU - also known as Masperso- as we know today was only established in 1971 to govern the expanding work of the broadcasting services controlled by the government (El Issawi, 2014). A regulatory charter was formulated in 1979-

law no.13- and modified in 1989 through law no.233(both annulled now to be replaced by the new media law), reinforcing the centralization of Egyptian broadcasting and giving ERTU "the sole authority over all radio and television operations in Egypt (Hussein, n.d.; Abdulla, 2014). The aforementioned laws gave the union "complete control" of the audiovisual media in Egypt (Boyd, 1999). Not only did the charter limit any broadcasting rights to ERTU, but it also obliged the public broadcaster to air "anything the government officially asks" to broadcast, thereby reinforcing the positioning of being a biased mouthpiece for the government (Abdulla, 2014).

Despite what el-Issawi highlighted that during Sadat's rule "[t]he monopoly was breached to some extent by the advent of partisan [print] media," television and radio remained under the government's control. The openness strategy was rather manifested in more Western programming such as music and films shown on Egyptian TV (Abdel-Baky, 2015). However, the content shown was still subject to another layer of filtration and control, namely through the Office of Censorship, which acted as a gatekeeper and editor of any scenes that conflicting with "religion and national security, official government position on issues of economic policy and foreign relations, and social ethics and traditional norms" (Kamalipour & Rampal, 2001). The state's censoring role was reiterated in 1983 through ERTU's "Central Administration for Revision and Scripts," which acted as a mandatory step for all content to go through before being broadcasted (Amin, n.d.) All programs had to be compliant with the state's cultural and religious values as well as in line with the state's political and economic views (Amin, n.d.).

The ERTU's financial model depended on a mix of advertising revenue, state funding, selling content to Arab counterparts, and a sort of licensing fee (Boyd, 1999). Similar to the radio license fee during the Nasserite rule, The Egyptian government resorted to adding a monthly amount to electricity bills, based on the assumption that higher consumption of electricity is

probably positively correlated to the use of a lot of electric appliances, including a television set (Boyd, 1999). The fee remained at two piasters up until 2013 (Sakr, 2013). No further literature addresses the fee, except for a news story published by Al Masry Al Yom newspaper in 2014, which reported that a request by Essam Al Amir -Chairman of ERTU at the time- to increase the fee by two or three piasters per kilowatt was refused by the government (Taha & Abdel Razek, 2014). The story reports also that the original fee was not two piasters as Sakr stated in 2013, but rather 0.2 piasters (ibid.)

Ownership of TV sets in Egypt continued to grow rapidly to reach 1,400,000 sets in 1982 and by 1988 the number more than tripled to reach 4 million TV sets across Egypt (Abdel Hay, 2012; Abdel-Baky, 2015). In 1985, a third channel was launched to serve Cairo, which marked what Abdel-Baky described as the "decentralization" of ERTU. It continued with the launch of "local" channels serving each of Egypt's geographic areas namely Alexandria, Suez Canal governorates, Delta, as well as two channels targeting governorates of Upper Egypt (Abdel-Baky. 2015). Until 1998 when Nilesat was established, Egypt had eight terrestrial channels, all managed and regulated by the state through ERTU.

2.2.2 The Era of Satellite Television

1990 marked an important milestone for the broadcast industry in Egypt. Cable News Egypt (CNE) was launched in Egypt as the first cable channel according to an agreement with the world-famous US news channel CNN to broadcast CNN International in Egypt (Amin, n.d). This did not mean that the government was willing to loosen its tight grip on the media scene. On the contrary, CNE's chairman being also the chairman of ERTU, was a clear message

reinforcing the status of ERTU as the only broadcasting entity and authority in Egypt (Amin, n.d.).

In light of the technological advancements and the rise satellite channels in the Arab region through the Arabsat, Egypt's entry to the satellite broadcast competition was imperative. Accordingly, Egypt launched the first state-owned satellite channel in the region under the name ESC, short for Egyptian Satellite Channel, in 1990 (Abdel Hay, 2012). A few years later, Nile Channel was launched in 1994 as a public diplomacy tool targeting audiences in Europe and therefore broadcasting in both English and French (Abdel Hay, 2012). In 1998, Egypt was the first Arab country to launch its own satellite Nilesat 101, followed by Nilesat 102 in 2000, enabling the broadcast of "more than 200 television stations and more than 60 radio stations" (Abdel Hay, 2012; Amin, n.d.). 1998 was also the year that witnessed the launch of the specialized "Nile channels," a group of thematic channels covering news, lifestyle shows, series, movies and comedy (Sakr, 2013). But, with the access to other satellite channel and the Internet, the Egyptian government began to lose its gatekeeper status with the audience. In addition, Amin highlights that the public broadcaster's clear bias to the government was another factor that led the Egyptian audience to look for other alternatives through satellite broadcasting (n.d.).

Therefore, a move to allow private broadcast media in Egypt was inevitable. In 2001, Al-Mehwar was the first privately owned satellite channel to launch on Nilesat, followed by Dream 1 and 2, all owned by Egyptian businessmen (Abdel Hay, 2012). But, under the ERTU charter mentioned earlier, the ERTU was still the only broadcasting entity in Egypt. To get around that charter, the Media Production City became a free zone, enabling the state to legally license the new satellite channels through the General Authority for Investment (Abdulla, 2014). Both Dream and Al-Mehwar opened the door for more politicized talk shows, pushing the boundaries

for freedom to talk about topics the public broadcaster would not cover, at least from the people's perspective. It was not long before the ERTU took a step to compete in that area with its flagship show Al-Beit Beitak, which was launched in 2004 during Ramadan, the month with the highest viewership of the year (Sakr, 2012). The show copied a lot of elements of Orbit's Al Qahera Al Yawm, a show that was launched in 2000 but remained unavailable in Egypt till 2003 when Orbit introduced a new decoder in the market, making it accessible to the Egyptian audience (Sakr, 2012). AlBeit Beitak brought in some of the presenters and crew members of Al Qahera Al Yawm with the objective to compete with the original encrypted show, and later also with Dream's AlAshera Masaan, which launched in 2005 (Sakr, 2012). The show garnered evident popularity but so did the competition which had a higher ceiling of freedom in the way it tackled sensitive topics and successive important political events such as the Presidential elections in 2005, the April 6th movement and Egypt's thriving blogging community at the time.

2.2.3 ERTU Post-2011

Another important milestone in the ERTU's deterioration was marked by its coverage of the Jan 25th revolution in 2011. Throughout the eighteen days of protests, the public broadcaster adopted a one-sided rhetoric that demonized protesters and promoting the official stance and the government's actions (Abdulla, 2014). The public broadcaster ignored covering protests that were happening a few blocks away from where news bulletins were aired, pushing viewers more towards private satellite channels and international news channels for more information on what was happening on the ground (Abdulla, 2014). Many presenters and crew members left the institution after refusing the way stories were reported or to distance themselves from ERTU altogether (Sakr, 2013).

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The revolution opened a door to potential changes in the ERTU. The staff started their own "revolution from within" when a complaint to the Prosecutor General was filed to investigate the misuse of public funds by the "information minister, the ERTU chairman and the head of news" (Sakr, 2013). This was coupled with internal calls for restructuring as well as editorial freedom of reporting, primarily for Nile News to be able to regain some its credibility and according to one of its presenters be "free" of the ERTU previous "shame" (Sakr, 2013). There were also many calls to dismantle the Ministry of Information and replace it with a "regulatory body or council to be in charge for restructur-ing the Egyptian media system" (Allam, 2017). An interview with Hassan Hamed, ERTU's chairman, in July 2011 shows how little has changed within the institution. Hamed stated "ERTU is loyal to the regime rather than to the public" (Abdulla, 2016). He also highlighted that his vision for a public broadcaster is for it to be more "educational and informative," which cannot be the case for ERTU given the pressure to make it profitable and competitive with its privately owned and commercial counterparts (Abdulla, 2016).

Meanwhile, many new privately owned satellite channels were launched even before Mubarak had stepped down such as Al Tahrir channel in February 2011, followed by many others such as Misr25 - which represented the voice of the Muslim Brotherhood-, Capital Broadcasting Center (CBC), and Al Nahar (Sakr, 2013). The abundance of new licenses was surprisingly still under the same licensing system that existed before (El Issawi, 2014). Many of ERTU's calibers and stars left to the aforementioned channels which offered a fresh start. For the audience, this only meant many more options to choose from and a better alternative to ERTU both in terms of diversity of political views as well as production quality.

After the Ministry of Information was resolved in 2014 the term "Al Fawda Al Eelameya," translating into media chaos, surfaced to describe the media scene in terms of both number of satellite channels and the content it aired. The dependency on controversy and sensationalism in return for advertising revenues made the channels full of unethical practices and many incidents of invasion of privacy (Allam, 2017). Yet, those channels were "the most favored platform by viewers" (Allam, 2017). In addition to advantaged competition, ERTU continued to carry its baggage of lack of credibility and being viewed as the government's mouthpiece by those who work within the institution as well as the general audience. Abdulla points out that ERTU's staff view themselves as "public sector media" that is part of the government, and therefore it is only natural that their loyalty remains to the government with certain editorial guidelines that are in line with that positioning (2016). She further explains how this has led to the disappearance of the true meaning of public service broadcasting in the minds of those who are responsible for it in Egypt and consequently in execution (Abdulla, 2016).

Another major problem that faced the ERTU throughout that period and until today is its debts and financial reliance on the state. With the declining revenue sources year after year post 2011, ERTU's debts continued to grow at alarming rates, reaching 19 billion Egyptian Pounds (EGP) in 2012 (Abdulla, 2014). In February 2018, Osama Heikal, Chairman of the Culture and Media Committee at the Egyptian Parliament, announced that ERTU's – now the NMA- debt has reached a staggering amount of 32 billion EGP (Heikal, 2018). The dependency on one revenue source, specifically the government, makes independence and impartiality hard if not impossible to achieve. In addition, the NMA has become a burden for the state's budget that shows no signs of recovery.

2.2.4 Post-Revolution Restructuring Efforts

In January 2014, a new Egyptian constitution was ratified whereby the Ministry of Information was replaced with three regulatory bodies to develop, govern and safeguard media in Egypt, both audiovisual and print media ("Egypt announces the…," 2014). The three main articles related to those bodies are numbered 211, 212 and 213. Article 211 states the establishment of the Supreme Council for Media Regulation, a body that is concerned with

> *"regulating audio and visual media affairs, organizing print and digital media, and others. The Council shall be responsible for ensuring and protecting the freedom of press and media established by the Constitution, preserving its independence, neutrality, pluralism and diversity, banning monopolistic practices, monitoring the legitimacy of funding sources for press and media institutions, and establishing the necessary controls and standards to ensure the commitment of the press and media to the principles and ethics of the profession and the requirements of national security, as specified by law."*

The other article directly related to the ERTU was article 213, which stresses on the independence of the National Media Authority that manages and develops the state-owned media institutions of all forms, and works to guarantee their independence, impartiality, professionalism and proper administrative and financial management (Egyptian Constitution, 2014). The articles responded to many calls over the preceding three years for the restructuring of the media system in Egypt and primarily the role of the public broadcaster, as well as protecting freedom of the press and media independence (Abdulla, 2016; Allam, 2017). Still, the Egyptian media scene witnessed a continued state of chaos and unethical practices due to the lack of laws to outline the technical details needed to activate the above mentioned regulatory bodies. In April 2017, President Abdel Fattah Al Sissi issued the necessary decree to establish the three regulatory bodies namely the Supreme Council for Media Regulation (SCMR), the National Press Authority (NPA) and the National Media Authority (NMA) ("Al-Sisi issues a…," 2017).

According to the new law - no.92 for the year 2016-, the SCMR and NMA were established each with a board of 13 members, with no majority given to the government or governmental institutions in order to uphold their independence (Law 92). Allam sees that the new SCMR role and regulations will allow "state-owned media to be converted into a real public service broadcasting system" while guaranteeing privately owned media a fair and transparent environment for competition (2017). In addition to its expected regulatory role, The Supreme Council for Media Regulation is also responsible for protecting the freedom of media as well as ensuring that ethical codes and practices are being followed in both private and state-owned media alike (Law 92). The law is also the first step towards converting state-owned media into public broadcasting services, with the establishment of the National Media Authority, which has replaced the Radio and Television Union. Despite the controversy the law stirred and skepticism that the new authority will change the status quo, the law outlines a framework for the responsibilities of the NMA that, if implemented, could transform the public broadcaster's status and performance on the long term. Allam also stresses on the importance of the role of the parliament in ensuring the political independence of the new NMA through being held accountable to it rather than the government, in addition to the independence of its governing board (2017). Another important factor to guarantee that is financial independence and the diversification of financial resources as it is the case in the developed Western countries discussed earlier.

The restructuring and overhaul process started in the second half of 2017. In February 2018 Hala El Said, Minister of Planning, announced the execution of a plan to settle the debts of the NMA over the next three years (Essam El-Din, 2018). The three-year plan also includes institutional reform that is guided by other successful public broadcaster models such as that of

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the United Kingdom and the United Arab Emirates (Essam El-Din, 2018). However, a report by the Planning and Budget Committee at the Egyptian Parliament issued in January 2018, confirms that the NMA will still record losses of 5.68 billion EGP for the financial year 2017-2018 (Mansour, 2018). On the content side, the development plan started with Channel 1, where a number of new programs were put in a plan announced at the end of 2017 ("Television prepares to develop…, 2017). The new shows, which launched in February 2018 carried a number of well-known presenters as well as an upgraded quality of production and a high definition visual (Hussein, 2018). The new content plan tried to provide a balanced mix of news and entertainment that could compete with privately owned and currently established channels in an attempt to regain the audience of the NMA. It was also reported that the new programs of channel 1 are planned to secure a yearly revenue of 50 million EGP through advertising planned by Al-Ahram and Al-Akhbar advertising agencies (Al-Ghitany, 2018). Howaida Mostafa, Chair of the Department of Radio and Television at the faculty of Mass Communication at Cairo University, sees that imitating privately owned channels in terms of programming is not what development means for an institution that aims to be transformed into a public service broadcaster (Galal, 2018). She added that advertising revenues should not be the main aim of the NMA but rather the role it plays in terms of informing, educating and serving the public interest (Galal, 2018). It is also remarkable that the digital presence for the NMA was not announced in any news stories that covered the restructuring or development plans of the NMA.

2.3 The VOD Market at a Glance

Online video consumption has exploded within the past few years, through both user-generated content and professionally produced content that are published through video-on-

demand services. The European parliament's study on OTT players in 2015 expects that according to digital TV research, online "video revenues will reach US$ 42.34 billion in 2020" ("Over-the-Top", 2015). A Cisco report published the same year expected online videos to occupy 64% of global "internet traffic by 2019" ("Over-the-Top", 2015). Ericsson expects that number to be 75% by the year 2022 with regards to the total number of mobile data traffic. ("Network vendor Ericsson, in its most recent Mobility Report, estimated that mobile video will be the increasingly dominant traffic generator, growing by around 50 per cent annually through to 2022, accounting for nearly 75 percent of all mobile data traffic ("The future of…, 2017).

Such expectations are not far-fetched when we look at numbers of subscribers and users of the different video platforms in the world. Elder reports that around 50% of US households are subscribed to one or more VOD services (2017). Oat highlights a growing VOD market in Western Europe as well with US players competing with competitive pricing for audiences of the European linear TV channels and their catch-up services (2013). An important reason behind this booming trend is the consistently decreasing costs of "networking, [...] cloud storage [...], and processing" with an average of 30% in the past 23 years ("Over-the-Top", 2015). With a service that requires a lot of large-sized files and sophisticated storage and delivery of content, such a factor added to increased profitability and scalability for businesses.

On another front, the development of the smartphone market and internet connectivity was key to the growth of video consumption across the world. In a global study by Mobile World Live in 2017 that surveyed video and mobile industry leaders across the world, smartphones came in second "as the primary way to consume video in the home," and came in first within developing markets "for 35 percent of respondents" ("The future of…, 2017). This is why a number of telecom operators around the world have ventured into IP rights buying over the past

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few years with the advent of triple- and quad-play services. ("OTTs vs TV…, 2017). For example, in March 2016 the Spanish telecom operator Telefonica bought the rights to "La Liga, the 2 domestic cup tournaments and Champions League football" for $2.61 billion dollars. BT followed suit in March 2017 when it paid $1.6 billion to renew the rights of a 3-season package of the Champions League and Europa League in the UK ("OTTs vs TV…, 2017).

2.4.1 The Technology: CDNs and Clouds

In general terms, video content can be "either fully downloaded to a storage and viewed afterwards, or accessed already in the process of its download." (Oat, 2013). The latter process is the more popular one and is what is known as a streaming video service. Oat explains that the streaming technology breaks up the video files into smaller packets, downloading them bit by bit, thus saving data traffic if a viewer does not wish to watch the full video at any point, as well as that it reduces the load on the player to download a file at once (2013).

The challenge that faced the VOD services next was the centralization of its data, making the load on its data centers and servers ever growing with each new market, a barrier to expansion and scalability. Therefore, major players in the VOD market resorted to a mix of cloud based technology and content delivery networks distributed across the globe to ensure this data load is balanced and to be able to provide their users with a good quality and a favorable user experience ("Over-the-Top", 2015). CDNs are a set of data servers strategically scattered around the world to ensure the smooth delivery of content with the same quality despite the high traffic numbers on the VOD website (Ramsinghani, 2017). Some providers - like Google and Amazon - have their own clouds and CDNs, while others are buying capacity from specialized CDN providers around the world ("Over-the-Top", 2015). The key here is not to rely on a single

CDN, but rather several of them to have a better service quality and empower the viewer to switch to a different CDN if one is not properly streaming due to any network or technical failures. This model is followed by the BBC through its "BBC Internet Distribution Infrastructure" (BIDI), which is part of a "mix" that includes other commercial CDNs. Frederico Benedetto, Product manager at the BBC explains that such a system improves quality through a minimized round-trip-time (RTT) for data packets as well as a reduced probability of any network errors (2016).

2.4.2 Controlling the Communications Process

The last part of the content delivery process, namely the internet connection is not usually managed by the VOD service provider. Platforms such as YouTube and Netflix are a good example of such services. However, other providers are offering a "managed service" where the provider "has control over the fixed or mobile access network used for its distribution" and thus can guarantee the quality of the service provided down to each individual or household ("Over-the-Top", 2015). An example of that are telecom operators that offer IPTV service as part of their packages. Deutsche Telekom (DT) in Germany has a video-catch up service as part of its package and therefore controls the quality of that service using its own distribution network. This means that the necessary network capacity is guaranteed by DT to its subscribers, putting the whole process under the network's control ("Over-the-Top", 2015).

Another route telecom providers are taking is to partner with content platforms and producers to offer attractive streaming packages for their customers. T-Mobile in the US recently launched a video streaming offer under the name "Binge On" that depends on content partnerships with other specialized platforms and later introduced a fixed price package that

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offers unlimited data consumption ("The future of…, 2017). A similar move was seen the other way around with Netflix, which partnered up with different "broadband providers including Vodafone in Germany, Orange in Spain, and SingTel in Singapore" (*"Pay TV in Mena…, 2016)*.

In April 2017 DT introduced a new program called "StreamOn" where mobile users can consume video and music content from a list of "preferred" partners "without reducing the high-speed data volume included in their tariffs" (Krieger, 2017). Not only does the list include the biggest players in the VOD market such as Netflix, Amazon Prime, YouTube, ARD/ZDF and other German catch-up services, but the company also confirmed that the content partners do not pay for a such "preferred treatment" in what is an evident effort to retain the customer base in all kinds of communications services, and primarily data and online media consumption (Krieger, 2017).

2.4.3 The Financial Models

There are different financial models for VODs around the world. The most popular one is the advertising based model, where the viewer watches advertisements before or within a video in return for free streaming of content. Chamberlain notes that this model is highly accepted by viewers due to the free-content proposition (2017). The following model is what Oat calls the Nearly VOD model (NVOD) where viewers are required to pay to "rent" a certain show or video, more known as the pay-per-view system (2013). As this is the least popular and successful model for content providers Chamberlain notes that there is a challenge is maintaining profitability when the buying choice happens on every single video, in addition to the burden of daily transactions on the website (2017). A subscription based model is what most of the most popular VODs currently follow (Chamberlain, 2017). The proposition is simple: an unlimited

access to all of the platform's library and an unlimited number of views for a fairly low monthly subscription fee. Netflix offers tiers of membership depending on the quality of the video (SD, HD, or Ultra HD) and on how many devices can be using the service at the same time (Netflix, n.d.) Most of the subscription fees across service providers range between $7.99 and $11.99.

A blended model is what YouTube introduced a couple of years ago through YouTube Red, a premium service that offers exclusive content as well as all of its video library free of advertisements. Hulu, which began as a catch-up service for TV giants including NBCUniversal, ABC and Fox, is now following another form of blended model, which Chamberlain describers as a "disjointed strategy" (2017). The video giant offers two types of memberships. A reduced subscription of $7.99 that includes "some" advertisements and another more premium membership that is completely ad-free priced at $11.99 per month. (Chamberlain, 2017).

2.4.4 Content Strategy

All of the big players in the OTT market offer a wide catalog of different genres and medium to long form content on their platforms. However, the newest factor setting OTTs apart is exclusive content. This strategy was pioneered by Netflix in 2014, who put exclusive content as a priority over wealth of catalog in its offering (Shrama, 2016). However, the content-war did not stop at exclusive licensing deals. Today, more and more OTTs are resorting to original productions of their own to hammer on the exclusivity part as well as reduce the cost "on expensive content partnerships" ("OTTs vs TV…, 2017). On the other hand, a study by Nielsen in 2017 shows the importance of a large library of "old content" as 80% of SVOD viewers time was reported to be spent on the platforms' back catalog of older content ("OTTs vs TV…, 2017).

Today, pure SVODs are led by Netflix, Amazon and Hulu in the US market as well as globally, while other regional players can be spotted in different markets such as the Malaysian iflix, the Phillipine's Hooq, and the Middle East's icflix (Cheh, 2017). In Jan 2018, Netflix was reported to have hit 118 million subscribers globally (Molla, 2018). Amazon has been always reluctant to give out exact numbers of subscriber base, but as it is related to their Amazon prime accounts, it is estimated to be around 85 million as of quarter three of 2017 (Heisler, 2017). For the purpose of this study, the three main platforms relevant to the Egyptian audience are discussed in detail below.

2.5 The Biggest VOD Brands

2.5.1 YouTube

According to Alexa's ranking of top websites in the world, YouTube comes in second worldwide as well as in Egypt and has been for several years. The site prides itself in having over one billion users, making it the top video content platform around the world. YouTube, which started as an ad-free amateur video-sharing website in 2005 has turned into a platform where "content creators" can earn money based on an advertising revenue based model (Holland, 2016). Chamberlain describes it as the "outlier" of the OTT market (2017).

YouTube has a competitive advantage that puts it ahead of other players on the market, namely being part of Google. Not only does the Google Cloud help in the quality of the streaming service for users, Google's search engine and "network infrastructure" are both powerful supporting factors for the success of the video giant (Magnusdottir, 2012).

In 2015, YouTube replaced its long time player partner - Adobe Flash player- with HTML5 as its default player due to its compatibility with different operating systems and

browsers (McCormick, 2015). YouTube engineer Richard Leider added that "HTML5's adoption of Adaptive Bitrate (ABR)" was one of the main reasons for the switch (McCormick, 2015). Through this feature, YouTube can adapt the video resolution depending on the the "network quality" of the viewer, which "has reduced buffering by more than 50 percent globally, and by as much as 80 percent on heavily congested networks" the company stated (McCormick, 2015).

YouTube is built on an ad-based model, where advertisements are placed in different formats before and throughout videos, with the creators are given a revenue share of 45% with the rest going to the site. The revenue depends on the so called CPM short for cost-per-mile or in the more common wording, per-a-thousand-views. In other words, it is "the amount an advertiser pays to have its ads served against videos 1,000 times" (Pinsky, 2014). The rate changes from country to country and from channel to channel depending on the bidding process that takes place on the site. Through a cost-per-view bid, the advertiser sets the budget they are willing to pay for their advertisement to be viewed, with 30 seconds of an advertisement considered as a view ("About cost-per-view…", n.d.)

In 2015, YouTube launched a subscription-based model under the name "YouTube Red", featuring an ad-free experience for its members as well as access to the YouTube Music application and the ability to watch videos online (*YouTube Red, n.d.)*. The 9.99$ monthly membership fee does not only feature the same content YouTube has in ad-free format, but also provides exclusive high-production content featuring some of its major YouTube stars (elder, 2017).

With other VOD services rising to compete with YouTube with high-quality content and attractive packages, the company is reported to invest heavily in producing its own original content within 2018 (Elder, 2017). For its ad-free Red service, Elder reports that YouTube is in

talks to produce "shows that cost between $3 million to $6 million per hour," putting it on the same playing field with HBO, Netflix and Hulu (ibid.). Such shows will not only be exclusive YouTube Red, but will also extend to the free site, with "six original series" for the latter in the pipeline (ibid.). Elder points out that by producing its own content, YouTube will be in control of the content and advertising process and can thus regain the trust of its advertisers that their ads will only run "next to high-quality shows" as the regular auction based model does not guarantee that (ibid.). On the other hand, higher content quality will put YouTube in a better position in negotiating more profitable sponsorship and advertising deals that can increase advertising prices on the website and decrease the gap between TV and digital advertising rates (ibid.).

2.5.2 Netflix

On their website, Netflix identifies itself as "the world's leading internet entertainment service" supporting that with the fact that it currently has over 117 million users around the world (*About Netflix,* n.d.*).* In 2015, Netflix was indeed leading the VOD market in Europe with "nearly half of the subscription" revenues ("Over-the-Top", 2015). Originally a DVD rental site, the company was a pioneer in introducing a subscription based model for an unlimited number of DVD rentals in 1999. Oat sees this model is an important reason why Netflix became the entertainment giant that it is today (2013). This is due to that this model was applied to their online streaming service that was launched in 2007 attracting millions of subscribers in a few years for a low and affordable monthly subscription fee (*About Netflix,* n.d.*).* The model is based on volume subscriptions that allows the company to offer its own original and high-quality productions, making it very attractive to audience around the world. In 2013, Netflix produced its own original series "House of Cards" that was a major milestone for the online content

industry (Shrama, 2016). Shrama points out that this move "ruptured the barrier between web television and traditional television." (2016). The same year, the company was the first online content platform to be nominated for the primetime Emmy Awards, competing with original television productions. "House of Cards" won three awards that year. The success of the series led to a shift in focus on exclusive content, thereby reducing the size of its library "by 31.7% since January 2014," yet producing over 110 original titles (Shrama, 2016).

A look at the below chart (Figure 3) shows the strategic importance of original and exclusive content for Netflix, making it invest in production more than established linear television producers with a staggering number of six billion US dollars in 2017 and 2018 ("OTTs vs TV…, 2017).
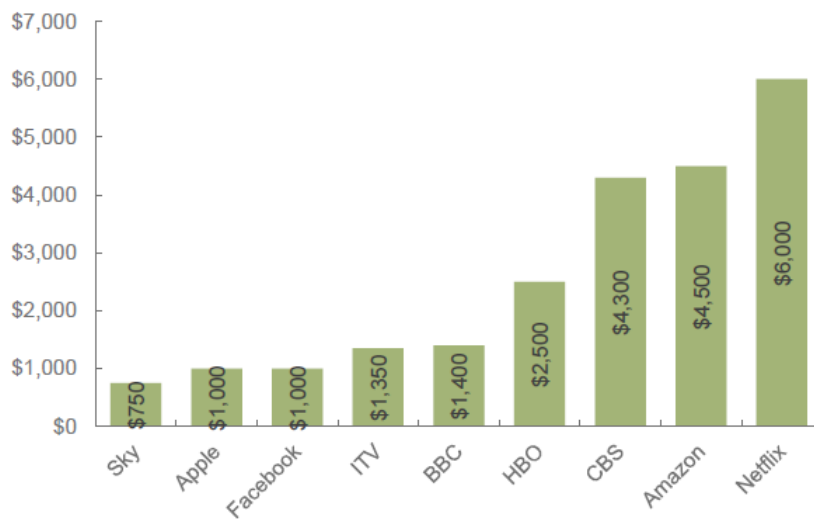
Source: Juniper Research based on corporate data.

Figure 3 - Production budgets of major linear and online broadcasters 2017-2018

Another success factor within the Netflix model is the user experience. In addition to the unlimited amount of content and views a subscriber has access to, Netflix shattered the "cliff-

hanger" model all producers followed and introduced the "binge-watching" feature. For its award winning series "House of Cards," the company published the entire season at once, garnering positive feedback on the move from its subscribers around the world. (Oat, 2013).

Contrary to a traditional content strategy Shrama explains that Netflix followed a simple principle "If a show fails to woo us on episode one, the next episode is a mere 15 seconds away from starting," thus increasing the possibility of the viewer continuing to watch more episodes even if the first one was not impressive enough (2016)

In his article, Xavier Amatriain, former Research/Engineering Director at Netflix, explains in detail how personalization played an important role in providing the best user experience (2013). In addition to basing title recommendations on previous views, ratings and search queries, Netflix introduced a feature named "Facebook connect," which enables the system to include one's friends' demographics and preferences in the algorithm that leads to more personalized title rows on one's Netflix account (Amatriain, 2013). Therefore, the personalized "genre rows" do not only include generic categories such as comedy, drama and thriller but also "highly tailored slices such as \Imaginative Time Travel Movies from the 1980s," making the experience personalized than any other platform and encouraging the viewer to watch more and more content while remaining loyal to the platform that "understands" them (Amatriain, 2013). A vast amount of data is further collected from how subscribers saw the recommended titles, at what time and how they interacted with it whether it was in the form of "scrolls, mouse-overs, clicks, or the time spent on a given page," enabling the system to be more adaptive and better every time a user logs into their account (Amatriain, 2013). The data is further used to help in the content strategy and what new types of content the company would purchase or produce ("Over-the-Top", 2015)

Oat outlines the technology infrastructure of Netflix by highlighting four main pillars: the player, the content delivery networks, clouds, and data centers (2013). Similar to how YouTube used to operate a few years ago, Netflix uses the support of three different external content delivery networks (CDNs) to ensure the quality of their streaming content, especially with their fast geographical expansion, their subscriber base and the nature of the content the website provides. (Oat, 2013). The other important factor in Netflix's system is the cloud capacity they have provided by Amazon, where the content is being centrally stored and the "CDN routing operations take place" (Oat, 2013). Registration and payment details of customers remain on the Netflix servers (Oat, 2013). As for the user interface (UI), Netflix uses the same technology as YouTube, namely HTML5 (Oat, 2013).

To support its global expansion plans, Netflix has invested in non-English content that caters to other main markets such as France and Spain. It also partnered with locally existing and strong "broadband providers including Vodafone in Germany, Orange in Spain, and SingTel in Singapore" (*"Pay TV in Mena…, 2016)*.

2.5.3 Facebook

The world's most popular social network has shown strategic moves in the past two years to venture into the video market, putting it as priority on its mobile application. In August 2016, Facebook launched Facebook Live, enabling users to "go live" at any given time, a feature YouTube offers only to a limited number of content partners (Newton, 2016). A year later, "Watch", a dedicated video platform on Facebook was launched in a move to compete with YouTube and Netflix (Collins, 2017). The platform is still being tested and limited to the US for the upcoming period ("OTTs vs TV…", 2017). Jhonsa sees that the competition Facebook has in

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its plan is primarily YouTube than Netflix or Amazon due to YouTube's similarity in mobile use and short and medium-long content format (2017). With an enormous reach of 1.5 billion daily active users, the website aims to be able to monetize its content in the same way YouTube does through a revenue-sharing model that would potentially attract content creators, including producers of premium content (Facebook, n.d.; "OTTs vs TV…, 2017). The high engagement rates Facebook enjoys will act as a unique selling point for advertisers as well as an attractive advantage for content creators (Jhonsa, 2017). However, for the time being, Facebook has been reported to be shopping for scripts and premium content for up to $3 million per episode (Jhonsa, 2017). Other reports state a total of a $1 billion budget for content in one year ("OTTs vs TV…, 2017).

The difference noticed between both the YouTube and Facebook ad-models is that while YouTube enables different types of advertisements, primarily pre-video and what is called "mid-roll" advertisements, Facebook will play only mid-roll advertisements in order to provide a better user experience (Jhonsa, 2017). Another key difference in the user experience is that Facebook videos are usually watched on mute and show as part of one's news feed, whereas on YouTube, users log in for the sole purpose of watching videos- typically with sound. YouTube remains a huge organized video archive and the go-to destination for searching for videos, with Facebook climbing up the leaderboard of top websites in the world right behind YouTube, marking a fierce competition ahead when it comes to video.

2.6 Public Broadcasters on Digital

Taking a look at public broadcasters around the world, the financial model is quite different. Viewers of public broadcasters' channels usually pay a yearly "public license fee" that

entails access to the channel's own online player, another common feature of public broadcasters around the world. In 2016, the BBC made access to its iplayer limited to those paying the yearly TV license amounting to around $200 (Jackson, 2016). In Germany, the public license fee for ARD, ZDF and the German radio service is around $22 a month and is mandatory for all households in Germany, even if it does not use a TV service ("Public Broadcasting License…, n.d.). This allows the aforementioned public broadcasters to provide ad-free content as well as other products such as Funk, a youth dedicated online streaming service launched by ARD and ZDF in 2016 (Krieger, 2016). The service was announced to be "commercial-free and funded by the public license fee" (Krieger, 2016). The CBC of Canada, in contrast, works on a different model that combines both public funding and advertising revenue (Taylor, 2016). Lagging behind on the digital front compared to its international counterparts, the CBC has announced a strategy for 2020 that puts not only digital but primarily mobile content as a priority over linear TV in its plan (Taylor, 2016).

France's public broadcaster has two entities namely for television and radio respectively. Both organizations are funded through a license fee of around $200 per household per year, as well as advertising revenues, in addition to some funding from the government (Sehl, 2016). All channels of the public broadcaster have a strong presence on digital media through separate websites for each, all offering a catch-up service that was launched in 2010, and is also accessible through smart television sets (Koc-Michalska, & Vedel, 2013). Premium content such as movies and series can also be watched at an extra fee (Koc-Michalska, & Vedel, 2013).

In India, Doordashan television network depends on YouTube as its platform for its videos and broadcast content. It also offers live streaming on YouTube, which is embedded in their website, yet not highlighted as a main driver of traffic or views. However, this is no

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indication of the online viewing market in India. Privately owned cable networks offer "mobile TV and on-demand video services" as part of a bundle for their subscribers. A report published by global consulting firm Deloitte in 2015 explains that the diversity and flexibility of offerings to the Indian audience is what makes the Indian VOD market unique ("Digital Media: Rise…, 2015). Subscription models vary between "daily, weekly, monthly, or long term basis," thus expanding to a pool of online audiences who might not be comfortable to commit to certain VOD platform for a long time ("Digital Media: Rise…, 2015). The Indian market also offers good alternatives for credit card payments - a barrier that faces many online businesses in developing markets- where VODs resort to "3rd party" wallets through banks and telecom operators ("Digital Media: Rise…, 2015).

Japan's NHK has taken several steps in its quest to fully embrace the Internet. In 2013, NHK launched a new technology called Hybridcast, which enables integration between online content and television broadcast material (Boyd, 2013). The technology brings television broadcasts to life through enabling it to be interactive with viewers via the Internet. For example, viewers watching a football match on television could use the Hybridcast service to view real-time information on the players on the field, match location on the map as well as other analytical details (Boyd, 2013). The technology depends on the synchronization between Internet data and broadcast data through the Hybridcast applications that are activated when a viewer's request is received through a set-top box in their home (Boyd, 2013). Today, the service is available on smartphones and tablets that act as a secondary screen with the customization menu at hand. In 2015, the technology was further developed to broadcast in 8k quality, offering more controls that enable the viewers to zoom into part of the broadcast, or view the scene from different angles "when multiple cameras have been used" (Japanese Broadcaster demos, 2015).

An amendment to the Broadcast Act in 2008 allowed NHK to launch its own VOD service - also known as NOD-, which is accessible through NHK's website (Yoshiko, 2010). Unlike the BBC for example, the VOD is subscription based and has to be paid for in addition to the license fee (Yoshiko, 2010). Yoshiko explains the reason behind such a fee system is that the demographics of the viewers on television or online differs (2010). Demographics of Internet views are more skewed to a younger age group, making it unreasonable to make a fee that includes VOD access mandatory (Yoshiko, 2010). In 2017, it was reported that the Japanese public broadcaster was considering waiving the VOD subscription fee for households "with existing TV contracts" (Hornyak, 2017). NHK's three-year plan announced in 2018, reveals a digitally dominant strategy that aims to further develop online services to include live streaming on their VOD to enable viewers to watch real-time broadcasts on any platform or device ("Japan's NHK will…," 2018). This goes in line with the government's plan to push all stations - public and private- to offer simulcasts within the next two years (Hornyak, 2017). The live-streaming service is set to be operational before the 2020 Tokyo Olympics ("Japan's NHK will…," 2018).

The Turkish public broadcaster went through digitization in the 1990s to meet the European Union's standards, launching its official website in 1999 (Tunç and Görgülü, 2012). The website has a live broadcast of all of TRT's channels, in addition to a mobile application that is available on different operating systems where viewers can watch live or access the content library of TRT's programming. Both platforms are free of charge.

2.7 The Digital Content Market in the Middle East

The digital content market in the MENA region carries a mix of catch up services for both free-to-air and pay TV, global VODs and SVODs as well as regional up and coming regional pure OTT services. The market has grown significantly over the past few years fueled by the rapid advances in telecommunications and the consumers' adoption for it, as well as the evident demand for online content (*"Pay TV in Mena…, 2016)*. In 2016, Foreign Policy magazine reported that "nearly 65 percent of the population is younger than age 30" in the Middle East (Lord, 2016). A report by Google in the same year ranked the MENA region second worldwide "in terms of watch time" with a year-on-year growth rate of 60% (Samir, 2017). The Arab Media Outlook Report published by the Dubai Press Club in 2016 highlights that "ad spending on OTT is growing at a faster rate than TV advertising at a CAGR of 21%" over the following three years. Revenues of SVODs in the MENA region is expected to "increase from $124 million in 2015 to $1.2 billion by 2021" (Wendel, 2017). This explains the interest of global players such as Netflix and Starz in the Middle Eastern market, in addition to the rise of many regional players such as icflix, Telly, and Cinemoz (*"Pay TV in Mena…, 2016).*

2.7.1 Shahid

Apart from YouTube content consumption in the region, MBC's Shahid was the spearhead of the online content market, launching its catch-up service on its owned VOD in 2011, followed by other pure OTT services such as Istikana in the same year and icflix in 2013. ("Shahid," n.d.; "Over-the-Top…," n.d.). Shahid was a second phase developed from MBC's portal launched in 2007, which garnered four million monthly views, a sign for the online market potential at the time (Al-Shagra, 2010). Today, the website hosts a variety of content of the MBC

programs as well as content of other networks with different regional distribution deals ("Shahid," n.d.).

In 2012, Shahid's mobile application "became the top downloaded app in the Middle East App Store" ("Over-the-Top…," n.d.). Based on that success, MBC launched a premium subscription based service in 2014, namely Shahid Plus (Papavassilopoulos, 2017). The service has a variable subscription fee across the MENA region and offers exclusive ad-free content from different parts of the world, in addition to the content available on the free VOD only with no advertisements to interrupt the viewing experience. MBC's official spokesperson announced in 2017 that the platform witnessed "400 times year-on-year growth" since its launch (Hawkes, 2017).

The media giant behind Shahid - MBC- clearly realized the potential of mobile in the Middle East and it being key to the platform's success. But the two main barriers facing OTT market entry in the region are high data costs and the relatively low credit card penetration rate coupled with a higher trust in cash. As Figure 4 shows below, a study on pay TV in MENA in 2016, indicates that consumers put cash as their first preferred method of payment, with very low numbers for credit card payment, with the exception of the United Arab Emirates (*"Pay TV in Mena…, 2016).*
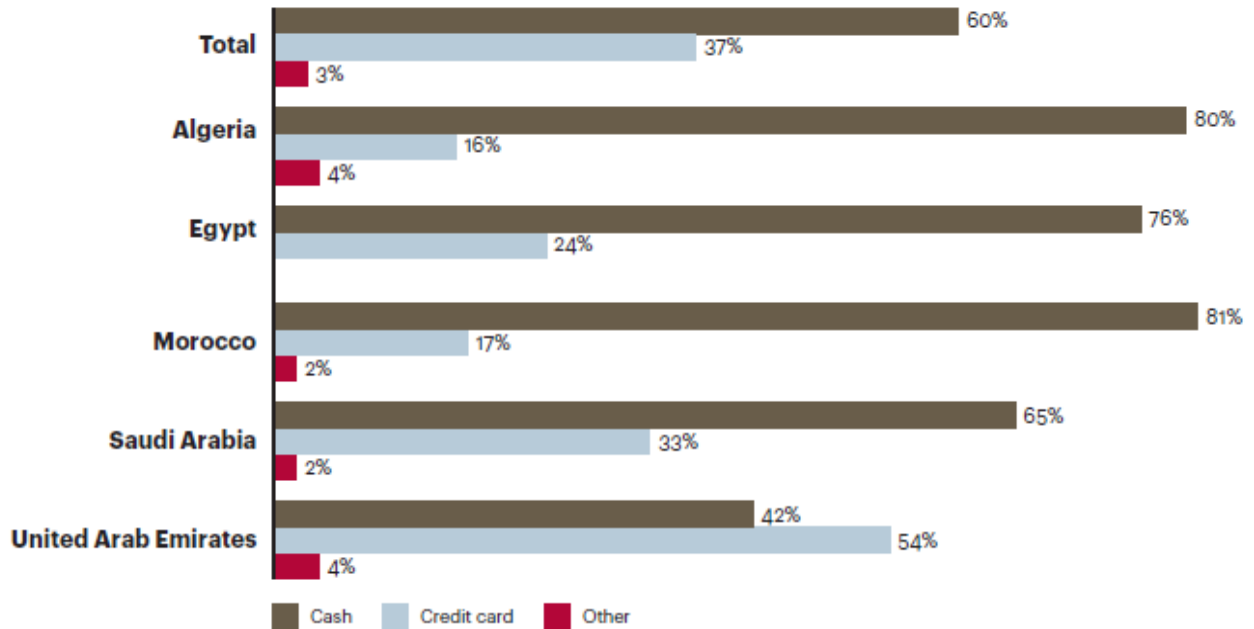
Source: A.T. Kearney Middle East consumer study

Figure 4- Payment preferences for pay TV in the MENA region

This is why Shahid has embarked on a series of partnerships with telecommunications companies in the region starting 2015 when Viva, one of the biggest telecom operators in Kuwait, announced a partnership with Shahid that enables Shahid Plus subscribers to pay from their mobile phones rather than credit cards ("Viva," 2015). The same deal was recently announced with Omantel in Oman in 2018 ("Omantel and MBC...," 2018). In 2017, MBC announced another deal with Ooredoo, a major telecom operator in Qatar, to provide all of Shahid Plus's catalog to Ooredoo's tv service customers ("Ooredoo tv customers…," 2017). A similar deal was announced with Etisalat - one of the main UAE operators- in the United Arab Emirates and with TEData of Telecom Egypt (Papavassilopoulos, 2017; Abdel Moneim, 2016). For the UAE, MBC is partnering up with Etisalat to give exclusive distribution rights to 17 HD channels the TV network carries through Etisalat's IPTV service (Papavassilopoulos, 2017). In

Egypt, Internet subscribers with Telecom Egypt of certain bundles get free access to Shahid Plus, in addition to three Gigabytes to consume on the AVOD Shahid ("Your television on…," n.d.). Shahid has also other deals with device manufacturers such as Samsung and LG with promotional offers that further promote the use of the SVOD on different devices ("Special offers," n.d.; ("Over-the-Top…," n.d.).

2.7.2 OSN

OSN is one of the main pay TV providers in the MENA region, with exclusive content distribution deals and productions of its own. The network's content strategy has always depended on exclusive distribution deals for world-famous content and shows that have proved success in the US, resulting in partnerships with several major production houses such as Viacom, Discovery and HBO (Dizadul, 2016).

Describing the online TV streaming opportunity as "tremendous," David Butorac, OSN's CEO, announced the launch of *Go by OSN*, a SVOD "compatible with all internet providers, and is available on fixed, Wi-Fi, 3G, and 4G mobile broadband across 24 countries in the MENA region." (Dayasena-Lowe, 2014). The platform, however, failed at competing with the existing players including Shahid and icflix due to its relatively high subscription fees when compared to other offerings on the market (Signorelli, 2017). In 2017, *Go by OSN* was replaced with *WAVO*, another OTT service with different packages and price categories (Signorelli, 2017). Still, the package prices are relatively high, ranging from 6.99$ to 13.99$ a month, but *WAVO* is counting on the exclusive content with some of the most sought-after shows such as HBO's Game of Thrones and Netflix's House of Cards (Signorelli, 2017). The platform is also following the *bein* network model in offering monthly as well as daily subscription models, in addition to the

standard trial period all OTT providers offer to attract more viewers ("No annual contract…," n.d.).

OSN also targeted different partnership deals with telecom operators in the GCC countries. In December 2017, Bahrain's main telecom operator Batelco announced a partnership with OSN to offer "OSN Ultimate Entertainment Package," a number of selected channels of the OSN network offered exclusively for Batelco's customers through Batelco TV and bundled with their home broadband subscriptions, in addition to "free broadband usage" when using the Batelco TV service ("Batelco launches TV…," 2017). In an attempt to promote its new VOD, *WAVO*, OSN signed another agreement with UAE telecom company *Du*, by which the latter's customers can enjoy free access to *WAVO* for a limited period till the end of 2017 (Cherrayil, 2017). Du announced that the access will be later bundled with other services the company offers (Cherrayil, 2017).

2.7.3 Netflix

Netflix entered the Middle East market in January 2016, facing stiff competition from existing players such as OSN, Shahid, icflix and bein. The company also had to offer only 20% of its global library due to previous content distribution deals it had in effect with OSN (*"Pay TV in Mena…, 2016)*. This is expected to be one of the reasons the company has not achieved the great success it has enjoyed in other new markets. Another reason is that Netflix, unlike its already long-existing competitors- did not have any partnerships with telecom operators who would have made payment options more flexible than credit card, a not so popular payment method in the region as discussed earlier. However, it is worth noting that Netflix's subscription packages are very competitive given the market prices. By the end of 2016 the company has

reached 137,000 subscribers across the MENA region (Neyra, 2017). However, IHS Markit research firm expects this number to grow tenfold "by the end of 2021" (Neyra, 2017).

To overcome such challenges, Netflix took a step to attract Arabic-speaking audiences in another way, namely producing localized content. Similar to what it has done before in markets such as France and Spain, where English is not the main or preferred language, Netflix has recently announced its first Arabic content production to air in 2018 (*"Pay TV in Mena…, 2016; Newbould, 2017)*. The new show is created by Arabs, starring Lebanese comedian Adel Karam and will be exclusive for the platform (Newbould, 2017). In February 2018, Netflix and OSN announced a partnership deal whereby Netflix's content library will be available for OSN customers across the MENA region by mid-year through a new OSN box ("OSN signs Middle…," 2018). Not only that, Netflix subscribers will be able to pay through their OSN bill, thereby partly overcoming the credit card hurdle. The move was much needed from OSN's side as well, as reports show that the company's decrease in subscribers by 10.5% might be directly related to Netflix entering the Middle Eastern market ("Netflix continues to…," 2018).

2.7.4 Icflix

Following the model of Netflix globally, icflix was the first pure OTT service in the region that launched in June 2013. The platform offers a wide range of content but with a special focus on Arabic content - which they call Jazzwood-, in addition to a mix of different genres to enrich their library ("icflix Set to…, 2013). The subscription fee is the same as Netflix, for 7.99$ a month. Since its launch, icflix had announced content partnerships with both ERTU and Arab Radio and Television Network (ART), which reinforces the importance of a back catalog for any VOD ("icflix Set to…, 2013). During the first year of its operation the company also signed

content deals with world renowned production giants Miramax, Paramount Pictures and Metro Goldwyn Mayer (MGM). Their content strategy also included producing original content with ten films and one series produced till now (Wendel, 2017). The highlight was in 2015 when their original movie *Borders of Heaven* won an award at the Dubai International Film Festival for best actor (Wendel, 2017).

The company embarked on an aggressive expansion plan since its launch, regularly announcing different partnerships with both devices and service providers. To overcome both credit card payment and high costs of data packages across the region, icflix partnered with several telecom operators such as Ooreedo in Kuwait, Zain in Bahrain, The Saudi Telecom Company, Orange in Egypt and Tunisia and others (Wendel, 2017; icflix, n.d.). It also offered an option of purchasing pre-paid cards that enabled viewers to subscribe without having to pay with own credit card ("icflix Launches Prepaid…," 2014). Icflix also made sure to be available on the major devices used to consume the service such as Apple TV, Xbox, Playstation, Samsung and Haier smartphones (icflix, n.d.). In 2017, the company announced a partnership with Dubai International Airport to offer free access to icflix for all passengers at the airport during their transit times, secured by the airport's free and reliable wi-fi service ("Watch new movies…," 2017). In late 2017 it was reported that the platform has reached 150,000 subscribers, in addition to around one million viewers watching on a trial or promotional basis (Wendel, 2017).

2.7.5 Starz Play

Starz Play Arabia is a special VOD launched for the Middle East from Dubai in 2015, and is part of a global U.S. based company named Starz (Saleh ,2017; Wendel 2017). The platform focuses on quality in terms of both video and types of content. It offers streaming in

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both HD and 4K, which could be a downside for Arab countries with limited internet speeds and infrastructure. Similar to other SVODs discussed earlier, Starz Play has also several content distribution deals with some of the biggest production companies primarily NBCUniversal as well as Disney, CBS and 20th Century Fox (Saleh, 2017; StarzPlay, n.d.). In 2017 it was reported to have reached 700,000 subscribers in the region (Wendel, 2017). Learning from its competitors in the region, StarzPlay partnered with several telecom operators in different countries to offer the option to pay through direct operator billing, thus making use of the high mobile phones penetration numbers in the region (Saleh, 2017). The deals include "Etisalat in the UAE, Vodafone in Egypt and Maroc Telecom in Morocco" (Saleh, 2017).

2.7.6 Barriers to Market Growth

Looking at the VOD market in the MENA region, several barriers were found common between all competitors that hinder them from potential growth opportunities. The most common problem is the low credit card penetration and more importantly the trust. Users still prefer cash in most markets and prefer free content even more (*"Pay TV in Mena…, 2016).* In addition, the challenge here, according to iclfix CEO Carlos Tibi, is that subscribers are of an age group of 16-35 "making them even less likely to be banked" (Wendel, 2017). That is why most of the VOD players have resorted to partnerships with telecom operators. (*"Pay TV in Mena…, 2016).* But striking a deal with a telecom operator in each country in the MENA region takes a lot of commercial effort none of the telecom operators in the region operate across MENA.

This leads to the next barrier to growth, namely the communications and fiber infrastructure across the region. A report named "State of the Internet" by Akamai - one of the world's leading CDN providers- in 2017 shows a huge discrepancy in Internet speed numbers between the different Arab countries (see Figure 5). For example, the UAE has an internet speed

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four times faster than Egypt, and Qatar has double the speed the Kingdom of Saudi Arabia enjoys. With a service that depends completely on the Internet and the existence of an uninterrupted and solid infrastructure makes this issue a challenge to consider with every new country a VOD platform plans to expand to in the market.
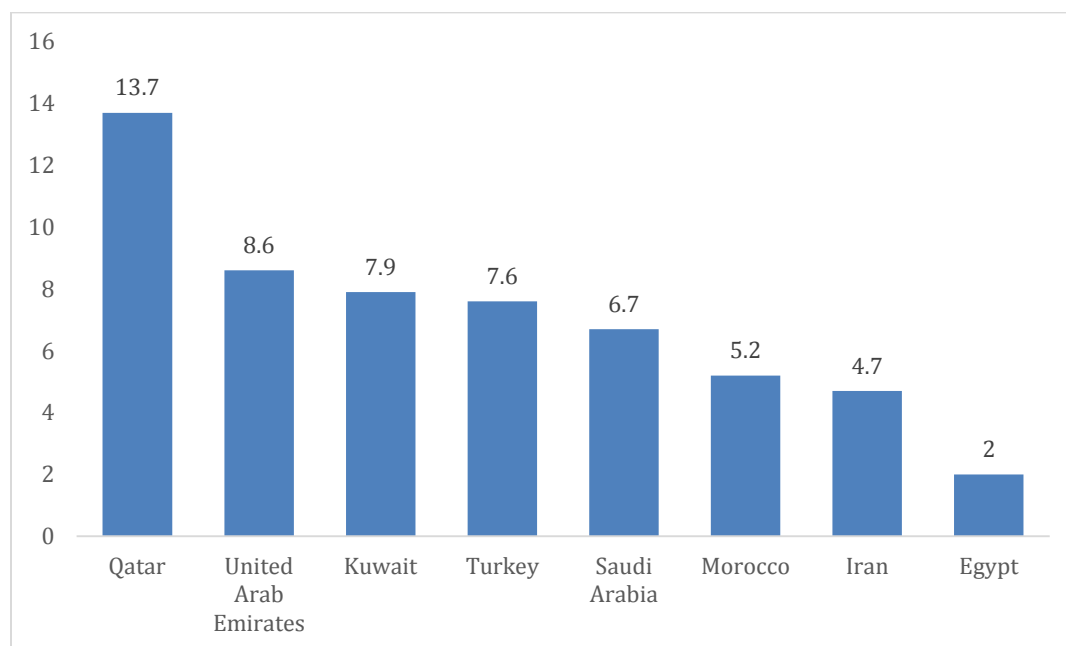
Figure 5 - Average internet connection speed in Q1/2017

Another barrier related to telecom operators is the high cost of data in the MENA region and again, a discrepancy in prices across the MENA region (*"Pay TV in Mena…, 2016).* While free-to-air television channels are aggressively competing in the market, their competitive advantage lies in both the free content aspect and the ease of access at minimal related costs. Viewers do not only have to have the proper infrastructure to view the quality of the content provided on VODs, but also have to be able to afford it as their main source of video consumption.

2.7.7 Egyptian Private Channels on Digital

Most of the privately owned satellite channels in Egypt have a digital presence through both YouTube and Facebook, with their main video platform being YouTube. Despite its main presence on Shahid, MBC Misr has the strongest presence on YouTube with 3.2 million subscribers and 1.9 billion views (data collected on 10 March 2018). Of the Egyptian channels, ON television network follows with around 2.75 million subscribers and 870 million views. Al Nahar and Al Hayah fall behind with 1.9 million subscribers each. The content strategy of most of the channels - primarily ON, DMC and CBC- relies on exclusive digital rights to the content their online channels carry, which helps with the views count as well as the digital revenues for the channel. Most of the main commercial channels have a live streaming service through YouTube as well, with the exception of Al-Mehwar. The table below (Figure 6) gives an overview about the main channels' presence on YouTube taking only their main channels - and not sub channels or program channels- into consideration.

Channel name	Year of creation	Number of subscribers	Number of views
MBC Misr	2012	3,289,355	1,925,531,286
On TV	2010	2,742,935	869,899,524
Al Nahar	2011	1,904,911	886,997,549
Al Hayah	2014	1,895,371	1,369,334,925
DMC	2017	1,196,404	533,617,575
CBC	2011	891,686	279,681,379
Dream TV	2013	806,578	425,101,220
Al- Mehwar	2011	638,310	199,094,057
Sada El Balad	2011	524,060	206,927,277
LTC	2016	393,499	209,110,196

Ten TV	2015	undisclosed	261,285,326

Figure 6- Egyptian satellite channels presence on YouTube. Data collected from YouTube on 10 March 2018

In 2016, Al Nahar TV network launched the first VOD for Egyptian satellite channels, Mago, which is free of charge to watch (Mago, n.d.). However, the platform does not any have advertisements on it or exclusive content as the same videos are available and more frequent on the network's strong channel on YouTube.

2.7.8 The NMA's Digital Presence

ERTU's presence on digital platforms is mainly through YouTube, with 21 channels found on the video platform representing the channels or the different shows. As mentioned in the statement of the problem section, the presence is very weak with a total number of 1,014,966 subscribers and 551,411,958 views for all channels (see Figure 7). There is also a clear absence of a digital strategy with different YouTube channels carrying duplicated content and programs having their own channels, which is probably the work of individual efforts of those working on the programs. Most of the channels were created between 2013 and 2017, with the exception of Naharak Said program, a daily morning show that airs on Nile Life, which created its own YouTube channel a few months after Jan 25th revolution in 2011. The channels also do not have a regular uploading pattern, some uploading episodes right after they are aired and some with months old content as their newest uploads.

Channel name	Date of creation	# of subscribers	# of views
Sabah El Kheir Ya Masr	29/6/2013	12,546	3,725,387
Egypt's News Center`	29/6/2013	29,572	2,633,791
Nile News	24/3/2013	23,672	4,467,912
Azizi Al Mowaten	27/5/2017	183	10,566
Panorama El Shabab	24/4/2017	365	48,505
Men Maspiro	24/2/2015	1,424	210,418
Nile Sport	1/9/2016	2,317	3,532
Nile Drama	22/6/2015	4,095	10,485
Nile Life	12/5/2014	ND	225,584
Naharak Said	15/11/2011	21,198	7,758,707
Maspero Zaman	4/2/2015	84,594	18,573,262
Al Ezaa Al Masreya	13/8/2015	75,666	23,414,507
Zakerat Maspero	24/12/2013	27,316	3,420,138
Maspero Drama	26/5/2014	442,139	396,647,919
Akhbar Maspero	6/10/2015	13,966	2,938,205
Maspero Reyada	6/10/2015	4,113	6,349
Al Barameg Al Taalemeya	15/10/2015	3,353	0
Maspero Atfal	6/10/2015	99,410	45,167,869
Ettihad Al Ezaa Wal Television	4/6/2013	152,450	41,074,181
Tasgilat Maspero Al Dineya	15/10/2015	14,100	1,021,954
Al Qanah Al Oula Qanat Misr Al Oula	12/7/2016	2,487	52,687

Figure 7 - NMA related channels' performance on YouTube (data collected 10 March 2018)

The look of the channels is outdated and does not follow a unified identity. For example, Nile Drama still carries the old logos of the Nile Television Network channels and Maspero Sport features a football background with famous actors from the 1950s and 60s on it. None of the channels has live streaming on their YouTube channel.

The most striking fact about the extracted numbers is that the videos with the most views are not the new ones, but rather old content. As Figure 8 below shows, 71.9% of the views come from Maspero Drama, which could be considered a library for all of the old and popular television series that were produced by ERTU and aired on its television channels throughout the decades. This goes in line with the strategy of global SVODs who have back catalogs of old content on their platforms to attract viewers as much as the new content does. Maspero Atfal comes in second place with 8.2% of the total views. This is due to that this YouTube channel has some of the most popular children's programs of the 1980s and 1990s that could be considered a cultural heritage of Egypt's media that were all productions of ERTU. Those numbers are a clear indication of the enormous potential NMA's content has if optimized and edited properly for the digital age.

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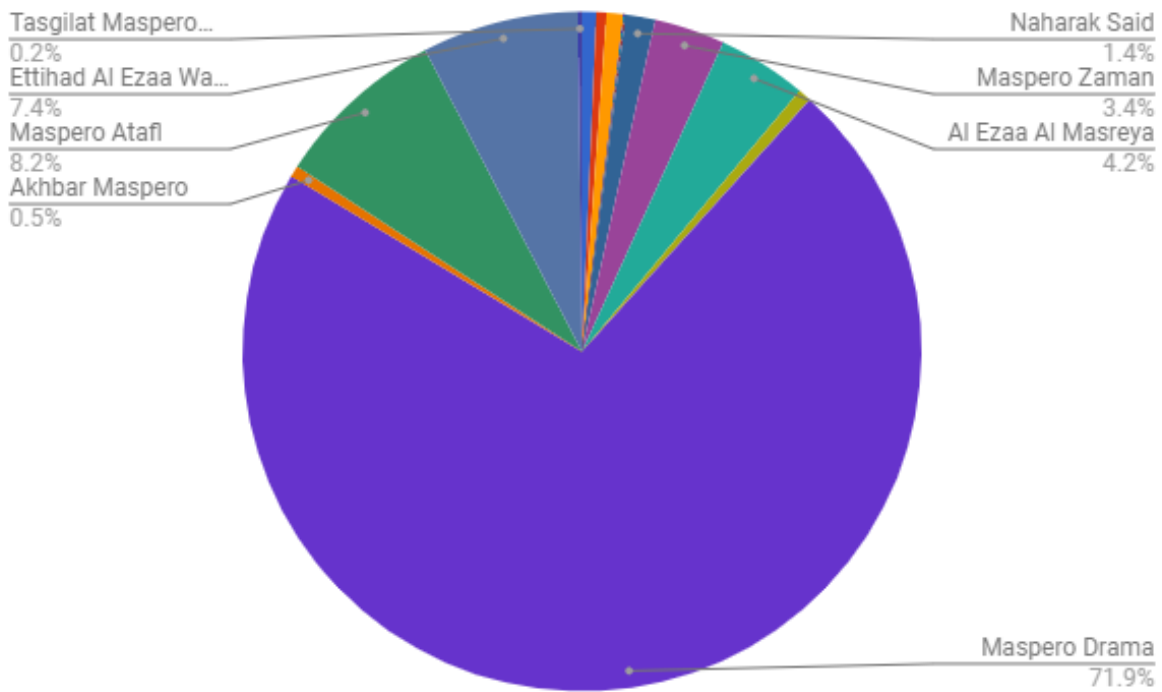
Figure 8 - Distribution of views of the NMA's related channels on YouTube (data collected 10 March 2018)

The recent re-launch of Channel 1 is not reflected on its YouTube channel with no videos of the new programs to be seen on it. Instead, snippets of the programs can be found on the channel's Facebook page, with very low viewership numbers at 5,000 views as the most watched video (data collected on 10 March 2018).

Chapter 3: Theoretical Framework

Based on the nature of the study and the research objectives, three media related theories were chosen to act as the theoretical framework for this study. The agenda setting and cultivation theories were chosen as two of the most important mass communication theories that are concerned with media effects on mass audiences and a viewer's relation to the medium. The Computer Mediated Communication theory was chosen due to its direct relation to the core of the study, namely online communication with audiences and direct interactions that are now possible between a content broadcaster and its audiences regardless of time and location.

3.1 Agenda Setting Theory

Research shows that the public opinion is greatly affected by what the news media covers about the topics that go beyond the audience's knowledge or personal experience. This was first extracted as a result from McCombs and Shaw's study of the U.S. presidential elections in 1968, which showed a correlation between the salience of certain topics on the media agenda on one hand and the public agenda on the other. The results showed "a very strong relationship between the emphasis placed on different campaign issues by the media and the judgments of voters as to the salience and importance of various campaign topics (McCombs and Shaw, 1972, p.181). Lang and Lang pointed out that media can draw attention to specific topics, pushing them into the audience's priority to think about. This influence power arguably enables media to "build up public images of political figures" (qtd. in McCombs and Shaw, 1972, p.177). Russell Neuman et al. conclude that the positive correlation between "media issue coverage and public opinion survey measures of issue importance at a single point in time represent evidence of media agenda-setting." (2014, p. 193)

Research conducted in the following years for the past four decades strongly supports the theory of agenda setting and how the media's coverage of certain topics can shift the public interest towards those topics.

Although the concept of agenda setting has refuted the law of minimal consequences set out by Klapper, selective perception does challenge the agenda setting effect when examined alongside the concept of need for orientation (McCombs and Reynolds, 2009). Focused studies by Weaver, Graber, McCombs and Eyal have shown that the agenda setting effects differed depending on the individual's personal experience with a given issue or their interest for it. A person's need for orientation increases parallel to the relevancy of the topic to them, coupled with a high level of uncertainty that makes them interested to learn more about the topic and thus more likely to be affected by the media agenda (McCombs and Reynolds, 2009).

Another level of agenda setting in media is the intermedia agenda setting phenomenon. Research shows a strong correspondence between the major news wires and smaller newspapers and media outlets when topics of their coverage were compared (McCombs and Reynolds, 2009). A prominent example highlighted from the US media scene is the New York Times, which is rightfully labeled as an agenda-setter with stories covered on its front page automatically becoming newsworthy for other media outlets (McCombs and Reynolds, 2009). But similarities in coverage topics by different media outlets could be a result of "common interests and sources among journalists" or agenda setting by major events or politicians as well (Neuman et. al, 2014, p.195).

Recent studies have also shown the expansion of intermedia agenda setting to the online space through both news websites and blogs. In a study by Lim examining the websites of two major South Korean newspapers and one wire service, the latter did not affect the agendas of the

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newspaper websites (McCombs and Reynolds, 2009). On the contrary, one of the newspaper websites did influence the agendas of both the other newspaper and the wire service in a clear notion to the intermedia agenda setting effect regardless of the medium.

Another form of agenda setting that was discussed in literature on the theory is "reverse agenda-setting" where what the media cover is driven or affected by what the public opinion is concerned with (McCombs, 2004).

Reverse agenda setting can be traced and applied to social media effects studies where discussions and exchange of opinions about topics that concern social media users mimic the offline dynamic that forms public opinion. Therefore, it could be considered an indicator of public opinion with trending topics or hashtags as an agenda-setter for both online and offline mainstream media. Neuman et al. point out that the "technical opportunity and most often the absence of enforced censorship" has given people the space to voice out their opinions in ways that may have not been possible offline, thus making social media conversations a considerable indicator of the public agenda (Neuman et. al, 2014, p.195). In response to that users of social media might not be representative of the population or what is really on the public agenda for the majority, Neuman et. al argue that surveys also "fail to capture this elusive gold standard of public opinion without bias and distortion" (2014, p. 196). Feezell also notes how influential peers on social media can be in agenda setting through "conveyance of relevance," where "both issue salience and relevance" are indirectly communicated through the simple sharing of a post, regardless of the topic (Feezell, 2018, p. 485). Trusted sources such as friends add more to the salience factor given that one's news feed is formed of posts by close friends of similar socioeconomic backgrounds and hence expected similar views and interests. One can assume

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that discussions on social media have replaced the once popular social clubs, political parties and forums where issues of public interest used to be discussed.

In Egypt, reverse agenda setting of social media can be seen many times where social media conversation have influenced the agenda of television and print media, and consequently the offline public agenda. This is why all major media outlets are investing a lot of time and effort to proactively exist on social media and expand their reach to new audiences to be part of the agenda setting process taking place on this new platform. It is crucial for the Egyptian public broadcaster to be part of the digital scene both to be aware of the trending topics as well as to play a role in setting the agenda with its own content.

3.2 Cultivation Theory

In an attempt to study the effects of growing up in a television dominated culture, George Gerbner devised the cultivation theory in the 1960s arguing that the more people watch television, the higher television content affects their perceptions of the real world. Putting the message itself and how it is perceived and processed by each individual aside, Gerbner was primarily focused on studying and highlighting the "broader scope of messages gradually exerted on the public" as a whole, and what effect it has on the long term (Potter, 2014, p.1016). Gerbner further explains that "[m]ass production and distribution of message systems transforms selected private perspectives into broad public perspectives, and brings mass publics into existence," which ultimately creates and influences what we call today the public opinion (Gerbner, 1969, p.140)

The theory was based on the results of his research model, which he named Cultural Indicators and where he conducted his research on three different levels to cover the different

areas related to cultivation. The first is institutional process analysis studies "the formation and systemization of policies directing the massive flow of media messages" (Morgan, Shanahan and Signorielli, 2009, p.34). The second focused on studying "week-long annual samples of network television drama" with the aim of identifying the different trends television programming is disseminating to the audiences. The third and most important with regards to cultivation effects is the cultivation analysis where surveys are conducted on subjects' perceptions and attitudes towards different societal issues. Results are then studied taking the level of television viewership into consideration for each subject, while keeping all other aspects constant. Cultivation analysis, however, is very much based on the second level of research, which is message system analysis. It is worth noting that although "evidence of cultivation is likely to be modest in terms of absolute size", a small shift in the cultivation of popular perceptions may result in changing the characteristics of a society and its culture (ibid, pp. 38-39).

Although the cultivation theory was originally derived from studying heavy television viewing, it can also be applied to today's most popular medium, namely the internet in general and social media platforms in particular. Taking the institutional analysis part of Gerbner's study into consideration, social media is a major change in "time, space and culture" of the way messages are being transferred, exchanged and produced on a large scale with a far greater potential in reach than television (Gerbner, 1969, p.140).

To be able to affect public opinion and culture within a society, one has to be part of the new cultivation vehicle where millions of messages are being produced every day and the messages one is being exposed due rely on a complicated algorithm of preferences, previous received messages and popularity, namely on social media platforms. However, when applying cultivation theory to new media, Potter points out that the mass media production on digital

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media might not be possible to group into a long term effect, as it "is now highly fragmented" and "that meanings are rapidly changing rather than stable" (2014, p.1030). On the messages level, a study conducted by North on possible cultivation effects of social media on brand loyalty, found a positive correlation between heavy and recurring use of social media and brand loyalty (2011). Here again, once can expect that a weak presence on social media for a brand might lead to a decreased brand loyalty.

3.3 Computer Mediated Communication Theory

Computer mediated communication (CMC) refers to all types of communication and exchange of information through the use of computer devices and communications technology, which started in the 1980s and quickly evolved with a lot of literature around it in the 1990s and later, exploring its pros and cons as well as its social implications on interpersonal communications. Walther notes that CMC was "an unintended byproduct" of connecting computers together for better transfer of data and information (1996, p.6). "Operators found they could send simple messages to one another," he explains, which was the start of the use of CMC in task related communications to the extent of it competing with face-to-face (FtF) communications when it comes to efficiency. CMC eliminated any potential distractions that would normally happen in FtF conversations and thus gained a lot of popularity and enthusiasm in the business world.

Looking at CMC from another perspective, many scholars argued that CMC led to "impersonality" of conversations and therefore evident lack of affection and intimacy (Walther, 1996). Given that CMC started as only in the form of text, it was argued that the lack of non-verbal cues such as body language, tone of voice and the human interaction element that was

taken away from online conversations, has resulted in keeping CMC as secondary to FtF conversations and categorizing the first more as impersonated and task oriented (Soukup, 2000). The depersonalization effect was evident in some study results where aggressive language was used much higher in CMC as compared to FtF (Walther, 1996). Kiesler et al. argued that users of CMC do not reach intimacy in the way participants of FtF conversations do (1984). Walther, however, saw that if given time, CMC conversations could overcome the lack of nonverbal cues and thus develop intimacy amongst its users (Soukup, 2000). A few years later in 2000, Soukup wrote an article about multimedia CMC, where he criticized Walther and other scholars for limiting their perspective of CMC as only text-based. But with the technological convergence, discussed in the following chapter, online text has evolved into rich video and audio, restoring all nonverbal cues and therefore heightening the potential effect of CMC.

On the positive side of text-based CMC, Walther highlights that due to its different group dynamic than FtF meetings, CMC enables an equal chance for everybody to voice out their opinion and thus, the elimination of non-verbal cues such as charisma, loud voice and others has democratized the communication process (1996). In addition, the anonymity of the internet gave users the chance to reflect only certain attributes of their lives and personalities, resulting in maybe a totally different character than what they really are in real life (Wynn & Katz, 1997). This was magnified nowadays by social networking platforms that, despite the availability of non-verbal cues through photos, video and audio, empowered users to reveal or hide as much as they want of their personal information, leading to more users who are vocal about their opinions, whereas they might never do that in real life.

This freedom has led to an increase in intimacy among online friends and users. A longitudinal study by Valkenburg & Peter showed that adolescents share a lot of intimate and

personal information with their friends using social media and other online networking applications. McKenna et. al studied online relationships and noticed that "[i]ndividuals reveal their true selves in online discussion groups" (Kashian et. al, 2017, p.275).

Today, CMC has surpassed FtF communications in light of the tremendous technological developments that have led to all forms of communications converging into one device, namely smartphones. This as Chan nots, has greatly affected the way people communicate with each other and how they "maintain their interpersonal relationships" (2018). Another important aspect of CMC is how it bypassed the geographical distance factor between friends, keeping them in contact, not only through text-based communication, but also through video and audio, mimicking the intimacy of FtF gatherings that might not be possible for many.

As for media institutions and broadcasters, CMC has become an integral part of their message dissemination as discussed in chapter 2. CMC not only offers reach and expansion to new geographies and markets, but also allows for unprecedented interactivity with the audiences, which was previously only possible through phone calls or letters sent to a show or a newspaper. Through the technological developments allowing for CMC to have video and audio, which could be recorded or live streamed, the same competitive advantage of captivating moving images that television usually occupied, is now available to everyone for a fraction of the price and with higher technology.

Chapter 4: Conceptual Framework

In addition to theoretical framework, the study is based on a concept that has surfaced in the field of media and technology studies for the past few decades, namely convergence. Convergence takes many shapes and forms within the aforementioned study domains. In this chapter, the different types of convergence relevant to the study are identified and discussed with relation to the media and information industries.

4.1 Media Convergence

One of the current definitions of convergence in the Merriam Webster dictionary is "the merging of distinct technologies, industries, or devices into a unified whole" (convergence, n.d.). But the term was not always used within the context of new technologies and how they influence the economy and the media industries. Rich Gordon looks into the origins of the term and its uses and traces it back to the 19th century when it was used in science disciplines as well as political disciples in the mid-20th century (Kawamoto, 2003).

The technological advances that were witnessed in the second half of the 20th century were the basis of both technological and media convergences. In the 1970s, former CEO of Apple, John Sculley, envisioned a convergence of telephony, media, and the Internet in one device, namely the iPhone (West and Mace, 2018). In his book, *Technologies of Freedom*, originally published in 1983, Ithiel de Sola Pool introduced the term "convergence of modes," where he explained that it is a "process" that is "blurring the lines" between different types of media communications whether it is one-on-one communications such as telephony, or other forms of mass communications such as the radio or television. Unifying the "physical" delivery method or technology for each of these media or communication channels diversifies their uses

and thereby convergence of media is achieved (Pool, 1983). Latzer describes this as the core "meaning of media convergence" (2013).

Jenkins, popularly known for his studies on media convergence and specially film, defined convergence as a "process, but not an endpoint" (2004). The process - according to Jenkins- changes "the relationship between existing technologies, industries, markets, genres and audiences," which used to go function parallel to each other but never meet, due to differences in technologies and delivery methods (Jenkins, 2004).

The term "media convergence" is used by academics as "an analytical concept" to study the changes and developments in media (Latzer, 2013). But Latzer points out that convergence "is neither an endless nor a steady process," but rather a temporary and unevenly growing process that had several "off-shoots" during the late 20th and the 21st century (2013). He further explains that convergence developments do not always mean that they are a step forward to uniformity (2013). For example, the rise of on demand services on the Internet has led to different content consumption patterns that are more individual and customized to every single user, resulting in further segmentation of the markets and audiences the media with its different forms caters to. Jenkins summarizes media convergence in its modern sense as follows:

"Some common ideas referenced by the term include the flow of content across multiple media platforms, the cooperation between multiple media industries, the search for new structures of media financing that fall at the interstices between old and new media, and the migratory behavior of media audiences who would go almost anywhere in search of the kind of entertainment experiences they want. Perhaps most broadly, media convergence refers to a situation in which multiple media systems coexist and where media content flows fluidly across them" (2006).

With the rise of the Internet and its applications, convergence does not only refer to technological convergence but also to media, as well as economic convergence that results from the merger of different technologies as well as media and methods of delivering content. This business and technology integration has resulted in a new type of industry classification, namely "information industries" (Chon et. al, 2009). Chon et al, segment the industries into three sectors namely "content production-related services," "content delivery-related services," and "data processing services" (2009). Each of the abovementioned services used to operate with no interference from the other only a few decades ago. And with the technological advances, they supported each other, but still with no real convergence on any level. Pool explains that having each technology working separately was beneficial for media institutions who did not have to put other forms of technologies they operate within as competition (1983). He gives the example of IBM and AT&T, which at one point were "giants of different industries" now compete within what is viewed as one industry, the information industry (Pool, 1983).

Chon et. al. listed three perspectives to analyze convergence, namely technological, economic, and industrial (2009). In 2013, Latzer added political and socio-cultural perspectives for the classification of convergence.

4.2 Technological Convergence

In 1995, Nicholas Negroponte's book, *digital*, on the digitization process and the developments expected within the following decades was visionary and touched upon the essence of technological convergence of media. He explained the process of migrating from analog to digital as one of converting "atoms" into "bits," where all solid and tangible media such as newspapers and magazines are atoms (Negroponte, 1995). He defines bits as the smallest

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part "in the DNA of information" and are characterized by being weightless, with no size, and "can travel at the speed of light" (Negroponte, 1995, p.14). He further touches upon the essence of convergence without using the term as he explains the results of digitization. Bits - information pieces- can be mixed together, which eliminates the boundaries that once existed to make atoms useable in strict formats. It enables bits to be used together and through the same delivery method, thus creating a new media product that can include video, audio and text at the same time (ibid). As atoms are inevitably changing to bits, companies of different industries will have to find a place for them in the new digital world and define their ability to provide their product or service "in digital form" (ibid, p12). Doyle described this development as the "driving force behind convergence" (2002, p.3). The digitization process also resulted in the economic convergence - discussed next in this chapter-, which emerged in 1980s with a series of mergers and "cross-media ownership" that eventually formed the current media ownership concentration we see today (Jenkins, 2006).

In addition, the recent development in communication and connectivity, will further push for technological convergence. The introduction of the 5G technology, expected to be available within 2019, is believed to be a huge leap forward in terms of connectivity that shall have its effect on all industries (Rosenberg, 2018). Shannon Lucas, Ericsson's Vice President and Head of Emerging Business Global Customer Unit explains that this development will have a big "potential societal impact" as the technology will enhance integrated connectivity in more than 10 main industries, changing the way we live and operate (2018). One of the industries is expected to be media, and primarily video, which is already heavily consumed via 4G connectivity and mobile devices and expected to "constitute 75 percent of data traffic by 2023" (Lucas, 2018). The latest Ericsson Mobility Report published in February 2018 shows

tremendous growth quarter by quarter in use of mobile data worldwide. As Figure 9 below shows, 55% growth was recorded in Q4 2017 as compared to Q4 2016. One can also notice the stagnant voice call consumption over the years as compared to the staggering data consumption numbers, in a clear indication of the communications market direction.
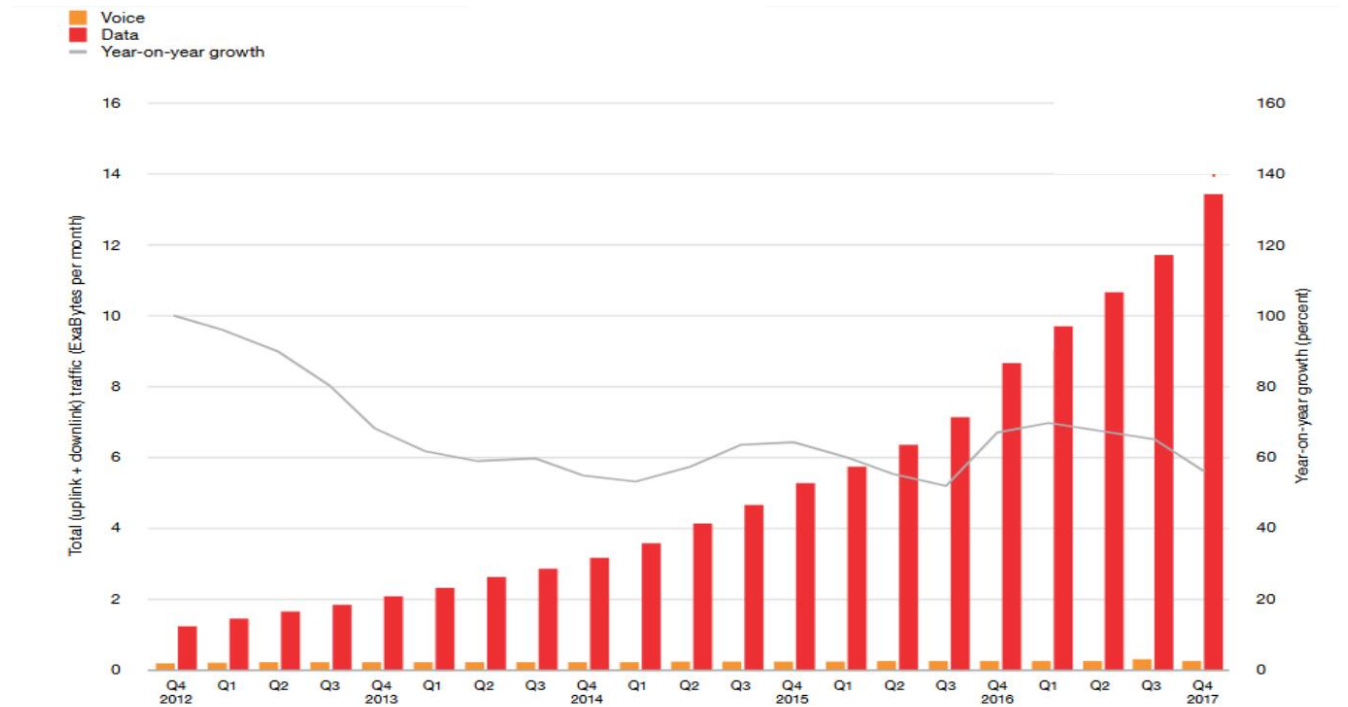
Source: Ericsson traffic measurements (Q4 2017)

Figure 9 – Quarterly growth of data traffic in the world

It is not only the connectivity that matters, but also the cost of data to consumers is what is expected to decrease further. As Figure 10 shows, with each new generation of internet connectivity, the service efficiency increases while the cost of data decreases, giving more and more users access to the internet and thus to mobile-based applications and services. Putting all aforementioned factors of connectivity, cost and growing video consumption into consideration, it is an inevitable move for both media and telecommunication companies to converge together

to offer the consumer an uninterrupted experience of media consumption on the go, which is what is discussed next, namely industrial convergence.
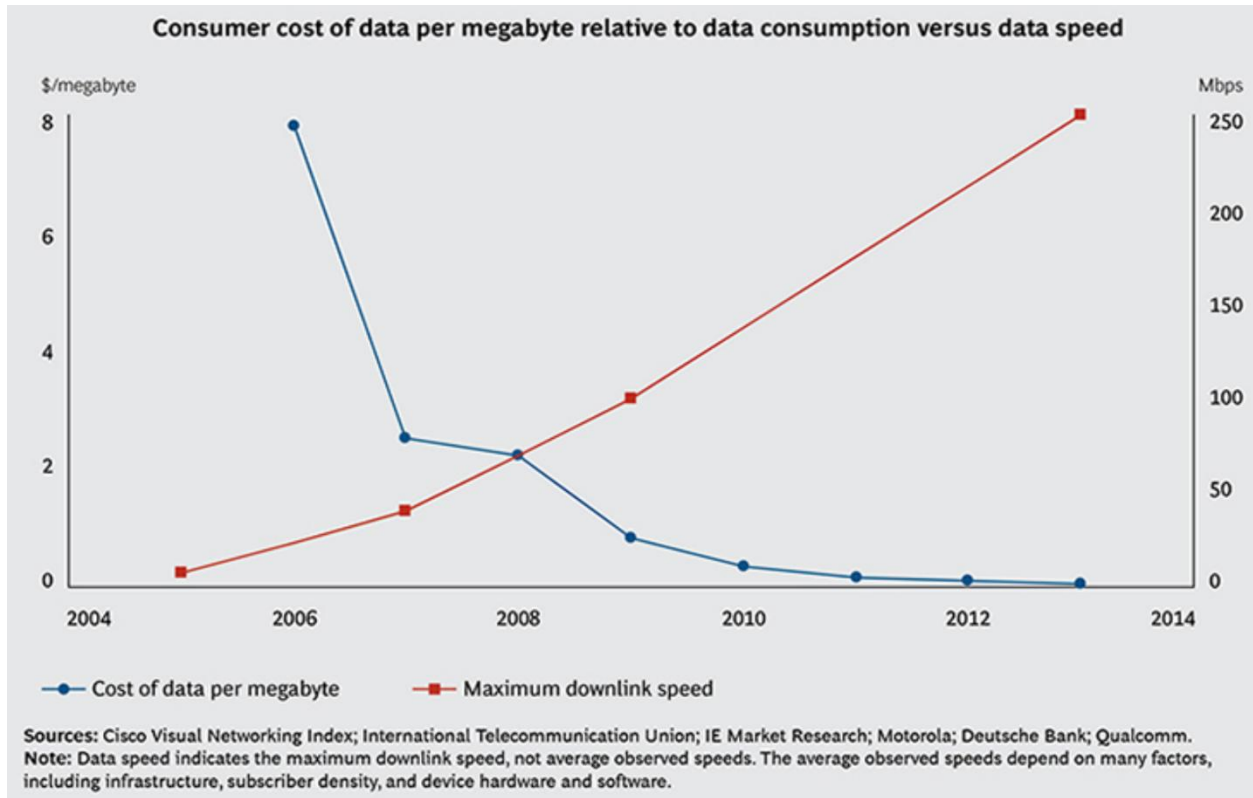
Figure 10– Cost of data vs data consumption year over year

4.3 Economic and Industrial Convergence

Economic and industrial convergences are very closely related. Within the same industry - such as the media industry- economic "[c]onvergence when one firm, through merger or organic growth, begins to sell products in hitherto separate horizontal markets" (Thanassoulis, 2011, p226). An example from the Egyptian market can be seen between the print and online media markets with newspapers launching their online portals and vice versa with the case of Al Youm Al Sabee newspaper. This is a result of the technological convergence discussed earlier, which forces businesses to alter and develop their business models to remain competitive on the market.

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The second level of that economic convergence is the industrial one, where companies not only offer services that are a natural result of its organic growth, but also extend their growth with "cross-industry mergers and acquisitions" that enable companies to morph from a single service provider or producer into a multimedia company or even a communications company (Chon el al., 2009). Latzer further explains how traditional media companies which used to compete vertically such as television or communications, are now competing "horizontally" on the level of content production or service transmission (2013). This can be noticed with companies that are offering triple- and quadruple play such as Deutsche Telekom (DT in Germany), highlighted in the previous chapter. Another example of economic and industrial convergence - which was also highlighted by Latzer- is Google, which started as a search engine and has expanded today into all sorts of multimedia and communications services, in addition to its innovations that go beyond the media and communications industry. The merger of services and the ability to deliver them through the same infrastructure leads to better financial offering and bundles due to the economies of scale, thus pushing competitors to convergence to be able to maintain their customers or audiences (Doyle, 2002). This has been also fueled by the eroding trade and economic boundaries that once existed between countries across the globe. Trade agreements coupled with the technological infrastructure and digitization made overseas expansion attractive and attainable, thus overcoming geographical and legal limitations (Doyle, 2002).

The merger between services, industries and their economies results in a disruption of the old legal and regulatory framework that defined each industry according to the previous vertical segmentation (Chon el al., 2009). Accordingly, regulatory convergence occurred as well.

4.4 Political and Regulatory Convergence

Political convergence is always referred to when discussing the regulatory changes that are taking place to cope with the aforementioned economic and industrial convergence. While convergence is beneficial for consumers and media conglomerates alike, it put regulatory authorities in many countries in a difficult position. On the one hand, media regulations were formed for each part of the media industry vertically, with no clear laws to define and govern the activities of converging entities. On the other hand, technological convergence paved the way for "new types of convergent services that are rather difficult to categorize or classify based on traditional classification" (Shin, 2005, p.47). Latzer notes a difference in the pace of convergence adoption between the industry players and regulatory bodies and policy makers (2013). While the services and industries quickly adapted and evolved into full convergence, he explains, policy makers are still slow in responding with both policies and regulatory bodies to organize and manage such convergence (ibid).

Katsieria uses the regulations governing print and broadcasting media in the United Kingdom to showcase the predicament the industry is currently facing with the convergence of both media. Both media have been regulated through different laws that were set as a result of how each of the sectors - press and broadcast- were established (Katsieria, 2016). While the press has been "free from state regulation," broadcast has always been subject to state control due to using the once exclusive and limited radio spectrum (Katsieria, 2016, p.464). This is a result of the purpose of each sector at the time of its establishment. Katsieria explains that print was a result of a "liberal market ideology" in contrast to broadcast, which was shaped by "social liberalism" decades later (ibid). Both sectors still carry many traces of the regulations set since their establishment, making regulatory convergence even harder. Latzer points out other topics

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arise with convergence that are within "regulatory responsibilities" such as "the protection of intellectual property, freedom of speech and the regulation of domain - name systems" (Latzer, 2013, p.10).

In Egypt, a new media law has been approved and ratified by the parliament, which outlines the guidelines for the different types of media institutions, as well as the work of the SCMR. It is evident that electronic media was taken into consideration when formulating the clauses that are mentioned in the different chapters concerning the establishment of media institutions and running them. However, the new journalism and media law is clearly drafted by lawmakers who do not fully grasp the limitless capabilities of the internet and that it cannot be treated the same way a traditional media institution is handled. For example, the law obliges electronic media institutions to register their activity with the SCMR to be granted a permission to operate ("Publishing the Full…", 2018). The law states a 2.5 million EGP as a license fee to establish an online channel and puts strict conditions on majority share ownership to Egyptians, in addition to a clause that makes it mandatory for any online "channel" to be in the form of a company owned by one or many individuals.

This is a clear indication that the regulatory bodies and the laws they produce are not on par with the technological advancements and the way the internet has changed the media scene not only in Egypt, but worldwide. Today, anyone can broadcast live through his personal Facebook account, can create their own YouTube channel and can address audiences across borders and in different languages with no regulatory confinements. The current law is created mainly for traditional media institutions, such as television channels, while the digital presence is treated as a byproduct and not an industry of its own.

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4.5 Socio-Cultural Convergence

In his book, *Convergence Culture*, Jenkins argues that convergence is not only about the technological aspect that affected the other aspects as discussed above, but also "represents a cultural shift" as the way content is consumed has dramatically changed and therefore the role the audiences play within the media ecosystem have changed (2006). Instead of traditional one-way communication systems that traditional media offered, the highly customized and on-demand media services have empowered the once passive receptive audiences into an integral part of the process. This ultimate personalization has led to a societal change in how we interact with different media products. Today, families do not have to read the same newspaper or watch the same TV show, and the once "group" or social activities are not anymore. A decade earlier, Negroponte expected the above mentioned cultural shift and rightfully saw a generational "cultural divide" taking place as a result of convergence (1995).

Chapter 5: Methodology

This study is a descriptive study that uses qualitative methods to achieve the research objectives. According to Nassaji, the purpose of a descriptive study is "to describe a phenomenon and its characteristics," which is identified in the previous chapters, as well as sought through the qualitative research design outlined below (2015).

5.1 Research Design

To gain insight into the actual potential convergence opportunities, a series of in-depth interviews were conducted with 12 interviewees who hold senior positions and/or are decision makers in the institutions involved with public service broadcasting in Egypt, in addition to industry experts and policy makers. A qualitative research method was chosen due to the depth needed to understand such a topic that will not be attainable through quantitative research. Roller and Lavrakas explain that what makes in-depth interviewing so unique, is that it fulfills the main objective of qualitative research, namely detail-rich insights into the topic of the study through the personal views and experiences of the participants (2015). They further explain that in-depth interviews are used "to obtain intricate knowledge, from a small number of members in a target population, based on a well--thought--out research design constructed to maximize credible and analyzable outcomes" (ibid).

5.2 Sampling

A nonprobability sample that is purposive was chosen as participants were selected and approached based on specific characteristics that serve the research objectives (Wimmer & Dominick, 2005, p.93). The study aims at exploring the different convergence opportunities,

specifically from the technological, economic and industrial, and regulatory aspects. Therefore, a sample of interviewees to cover each aspect of convergence was selected. The respondents had to have at least ten years of experience within the field to be able to reflect on previous experiences and market dynamics that they have witnessed. Since this is a case study on the Egyptian public broadcaster, senior executives from the NMA were interviewed to stand on the latest developments in the convergence efforts and what the digital strategy of the NMA currently is. Based on what the literature review has revealed, I see a potential opportunity for economic and industrial convergence with telecom providers for the NMA to be able to compete on digital platforms. Therefore, senior officials from Telecom Egypt - the partially state-owned telecom operator- were targeted. Lastly, members of the National Media Authority, the Supreme Council for Media Regulation, and the Media Committee at the Parliament were targeted for interviews with regards to the regulatory convergence as well as the economic one. 21 respondents were contacted from the four respondent categories, resulting in 12 confirmed and conducted interviews.

The sample size was affected by two elements, namely the saturation point and access to respondents. Saturation was reached on two fronts, theoretical and numerical. The theoretical saturation was determined through different categories of respondents to respond to the themes to be analyzed in this study. This is based on the grounded theory by Glaser and Strauss, who defined saturation as the point where no more data to the searched category can be found, and thus the researcher moves to another category to achieve the highest level of diversity (1967, p.61). This is evident through the respondents list in Appendix A. During the data collection phase "informational redundancy" was reached as more and more respondents gave very similar answers and views on the topic (Sandelowski, 2008, p. 875). In their study aiming to define the

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concept of saturation and the degree where saturation is reached, Guest et al. observed that data saturation was reached after analyzing 12 interviews out of 60, where redundancy in both categories and information was found beyond that point (2006, p76). They also pointed out that purposive samples are usually homogenous given the criteria the respondents are being chosen for and thus the more homogenous the sample is, "the sooner [it is expected] to reach saturation" (ibid).

5.3 Instrumentation

As the research is based on a case study of the public broadcaster within Egypt and the Egyptian online market, semi structured interviews were chosen for designing the interview questions. Minichiello describes the semi-structured interviewing method as similar to the "loosely structured model of interviewing" as the way the questions are being asked reflect that, however, there is "topic area" that keeps the questions in line with the purpose of the study (1990, p.52).

There are four sets of interview questions for each category of respondents namely for NMA officials, Telecom Egypt officials, regulatory bodies and industry experts. The number of questions ranged from 6-16 with a number of general questions that were asked to all of the respondents in the sample regardless of their category. All questions are open-ended in the interview outline, but they were all flexible to be slightly changed in wording or sequence depending on the responses of the interviewee (Strong, 2011, p.86).

5.4 Data Collection and Analysis Procedures

The interviews were conducted in the period from the 29th of May 2018 to the 30th of June 2018. Before the interviews that were conducted face-to-face, all respondents were handed out a consent form (see Appendix F) that clearly stated the purpose of the study and asked the interviewee for their permission to record the interview as well as reveal their identity in the research findings. All of the respondents signed the consent form and agreed to both aforementioned requests. The interviews were mostly conducted in Arabic. Accordingly, all interviews were digitally recorded and notes were also taken to outline the most important insights mentioned throughout the discussion. All interviews were translated and transcribed. All interviews except for one were conducted face-to-face, while the latter was conducted over the phone.

Most of the interviews duration was around 45-60 minutes, with a few of them of shorter and longer durations than the aforementioned range. This was determined by the data saturation point of each interview highlighted by Legard et al. in their literature on in-depth interviews, where they recommend probing the respondent until the researcher has "a full understanding of the participant's perspective" (2003, p.152).

The limitation to this method is that it cannot be generalized due to the small sample size that is not random one (Boyce & Neale, 2006). Yet again, the purpose is a case study about the Egyptian public broadcaster, which could be compared to other public broadcasters but cannot be generalized due to the different political, economic and social factors that affect the role a public broadcaster has in any given country. Access to data and statistics about the Egyptian media industry are also limitations that were encountered while conducting this study.

Chapter 6: Findings and Analysis

6.1 The State of the Digital Media Scene in Egypt

Most of the respondents had generally negative feedback about the digital media scene in Egypt. From a journalistic standpoint television host Sherif Amer sees it as "catastrophic". He explains that social media has influenced media professionals in such a way that made them take their information from social media posts and neglecting fact checking. This, in his view leads to a lot of false information getting spread through television shows and media professionals who are supposedly trusted sources to the audience. Dr. Hassan Aly, Dean of the School of Media at Suez University, agrees with Amer as he sees that the chaotic scene on digital media is due to lack of governing media laws that can hold people accountable for news that they publish and spread on digital platforms. "The digital scene has no one to regulate it," Aly adds, explaining that there no clear laws or guidelines on which umbrella electronic media fall under. "Is it the Higher Council for Media? Is it the National Authority for Journalism? Or the Press syndicate?" he asks, concluding that there is a clear lack of regulatory framework for digital media in Egypt. The same point of view on the regulatory aspect was expressed by Magdy Lasheen, Head of the Egyptian TV, who described the digital media scene in Egypt as "confused" with "no guidelines."

Osama Heikal, Chair of the Culture and Media Committee at the Egyptian parliament and former Minister of Information, sees the digital media scene in Egypt very much behind what is happening on the global scene and highlights that the problem lies within the people who work in the media industry in Egypt. "They still don't understand the market tools for the digital technology," he explains. Gamal El Shaer, Deputy of the NMA, has a similar view to Heikal and Aly as he interprets the lack of legislations for digital media as evidence of how much digital

media is lagging behind on all fronts in the Egyptian media scene. Hossam Saleh, Chief Operations Officer of Egyptian Media, one of the biggest media institutions in Egypt, sees the digital media scene as "unstable" with not enough attention given to it. "Everyone is saying it's important, but actually their actions are very limited."

But Saleh, unlike several respondents, sees a shift in the mindset of top executives in the media industry where digital media is now a priority for them, rather than being a marginal product that senior management did not pay attention to before. But on the performance level he agrees with most of the respondents that Egyptian satellite channels have a weak presence on digital platforms that doesn't utilize the full potential of the Internet. "We are not producing content for digital… We usually create offline content and then turn it into an online one," Saleh adds. Amer agrees as he describes digital media for satellite channels as a mirror of their television grid. Dr. Naila Hamdy, professor of Journalism and Mass Communication at the American University in Cairo seconds that opinion as she explains that the "interactive use" of such platforms is not exploited in any way, and no interaction with audiences can be seen. For those channels, Hamdy sees their use of digital media as only "a delivery of distribution channel." Osama El Sheikh, former Chief Executive officer of Egyptian Media and industry veteran, criticizes the digital performance of all channels, saying that "there is no performance whatsoever," due to the management in place. He further explains that all of those working in the current privately owned television channels come from a sales background and therefore all they care about is selling their Ramadan drama without realizing the potential of digital media and a strong video platform. For him, he adds, even the revenue from YouTube is not enough when one invests in drama worth millions of Egyptian pounds. Heikal confirms that there is a problem with management mentality, but disagrees with Saleh about digital being a priority for senior

management. He elaborates that the industry will move forward when "we include more young people" in it.

Given the aforementioned views on the digital media scene, all of the respondents see a lot of untapped potential for it in Egypt to the extent that some of them stated that it's still too early to talk about contenders or competition on digital platform. Heikal emphasizes on an issue, which is he sees on both television and online, namely lack of specialization. He explains that all channels are trying to compete for all types of audiences with no specialization, leading to a distorted vision that reflects in the way messages are communicated. "If my target audiences are young people my methods will be totally different than if my target audience were intellectuals or economists," he points out.

6.2 Perception of the NMA

The general perception of the NMA by the respondents was that it's an old and "worn out" institution that is full of problems. "Maspero's capabilities have been wasted either intentionally or due to incompetence," Heikal explains as he describes the broadcaster as "out of the race." Hamdy stated that she doesn't think anyone watches Egyptian state television anymore, in contrast to El Sebai and Lasheen, who both work at the NMA, and believe the NMA still has its audience who is looking for its content and following it. The same optimism was shared by Dr. El Sayed Azzouz, board member of the NMA and Head of Spectrum Management at the National Telecom Regulatory Authority (NTRA), who expressed that the content produced is not bad with the given capabilities and resources. Aly views the state of the NMA as a "bundle of problems" including corruption, old equipment, rigid laws and above all restrictions that restrain any creative work and has led, in his view, to "a bad screen." Othman also raised a

question of how the NMA is a priority if the state is acquiring privately owned satellite channels and neglecting the old institution.

As viewers, most of the respondents, with the exception of those who work at the NMA, stated that they do not watch NMA's content on television or online, due to that it doesn't interest them as viewers. Hamdy, explained that despite her being a mainly online viewer, she did not encounter their content or promotions for it anywhere to notice it. Saleh said he only follows one morning show on YouTube, namely "Sabahak Gedid." Dr, Maged Othman, board member of Telecom Egypt, said he doesn't watch the Egyptian public broadcaster on television and has never seen it online as well. "I only follow Maspero Zaman on Twitter," added Amer, which he says is due to the old content they post, which he still values. Aly explained that he watched it in the beginning after the recent development of channel 1, but stopped watching as he was greatly disappointed. He further highlights that the development was "superficial" and didn't tackle the main issues, which is creating good content and developing the staff. "It's like I renovate the facade of a building and make it look fantastic, but once you go in, you find it totally worn out," Aly adds.

What was striking is the contradiction in opinions between some respondents who belong to the same organization, namely the NMA. For example, while Lasheen confirmed that a digital strategy is an important priority and part of the plan for the NMA, El Shaer disagrees, referring to the media law as evidence that such a statement "is not accurate at all". He further explains that he was part of the committee that discussed and formulated the law and that there was a huge argument about the definition of a newspaper and whether digital newspapers should be considered as newspapers or not. He concludes that digital media "is not within the vision for a new media strategy." The same conflict in views occurred when discussing the NMA's ability to

compete. On one hand, Lasheen sees that the NMA does not need to compete and that it is delivering a totally different message and has a mission. On the other hand, ElShaer sees that not competing means you do not reach your audience and therefore have lost the whole purpose of the medium, namely informing and influencing the public.

6.3 The NMA's Strengths and Weaknesses

To answer RQ1, a number of factors have been extracted from the respondents' answers when asked about their view of the current situation of the Egyptian public broadcaster and what is helping or hindering its success. The points below are listed in descending order, from the most positive to the least positive factor, i.e. from the strongest factor to the weakest factors.

6.3.1 The Back Catalog

All of the respondents mentioned the library of the Egyptian television as an undeniable "treasure" that cannot be underestimated. Heikal points out that if this extensive library is organized and restructured, "it could generate a fortune" online. "Masperso has huge assets, and of course has the biggest media library in the Middle East," El Shaer stated. He explained that the NMA started digitizing the library but this, in his view, is not utilized.

But old content, some respondents point out, cannot suffice on the long term. "No one in the online world is looking for old content as much as they do with new content," explains Saleh. El Shaer agrees that old productions are not enough and that the NMA has to go into a different form of production that is suited for the online community and its interactivity. Hamdy and El Beheiry still see huge value - mainly sentimental - in the old catalogue, mainly through the movies and series the NMA has the rights to.

6.3.2 Steps Taken So Far

As revealed by the respondents who work for the NMA or are part of its board, there are positive steps that have been taken with regards to digital presence for the NMA. Azzouz explained that the NMA is currently working on an application that is an extension of the unified portal and through this application, the user can watch any of the NMA's content as well as news and information. This phase, Azzouz continues, is the second phase of the plan, and is done with the cooperation of the Ministry of Information.

El Sebai, who heads the digital team at the NMA, confirms the second phase of the plan, indicating that there will be two applications, one focused on news, and the other a more comprehensive one for all of the NMA's entertainment content. Given the unconventional team structure El Sebai has - which is discussed further later in this chapter - I see considerable effort being put into the project despite minimal resources and access to calibers with knowledge of digital platforms.

6.3.3 The Staff

Most of the respondents agree that the staff at the NMA has good qualities. But all of them differentiate between the management and the staff. "Maspero is the school where three quarters of those who work in the sector now have graduated from," Saleh explains. Hamdy agrees but points out to a huge drawback all respondents mentioned, namely the number of employees. Heikal notes that this is the result of decades of hiring a couple of thousand people for every channel that was established every year, leaving them with no training or development. Aly adds that the institution did not create any second or third generations, leading to unqualified caliber in leadership positions. El Sheikh agrees that the staff's experience at the NMA is way

behind where the industry is at right now. He adds that no fresh graduates have been hired for over four years while the existing staff are not trained or up-to-date. Aly sees that the good people need to be picked out and "have their skills polished" at major media corporations such as the BBC, CNN and DW.

While Hamdy and Othman see the starting point to solve the NMA's problems are to downsize from 35,000 to 10,000 people, Aly sees a more inclusive approach to the matter, where the staff should be put through tests to pick out the "good ones" and put the rest to the "sidelines" without letting them go. Despite Lasheen's confirmation that there is training taking place to develop employees for the digital era, El Shaer and El Sebai stated that any training takes place due to individual initiatives and is not institutionalized. El Sebai explained that he organizes some training workshops, but focuses more on practical training and mentoring, which he believes has more impact on his team's professional development.

Moving to the leadership, half of the respondents believe there is a serious management problem. "There is a problem of management, structure and the lack of managers who understand and are aware" of the digital trends, El Sheikh explained.

6.3.4 The Vision

Closely related to the management topic, is the vision for the NMA, which many of the respondents pointed out to as lacking. Othman gives an example from his work at Baseera, a research and polling center, where they have been waiting for regulations to conduct a media poll on Ramadan drama for months from the SCMR "with nothing happening," which led to them losing a business opportunity, but more importantly, Othman notes, reflects how much those in leadership positions don't grasp the importance of digital media and how its pace is.

El Shaer and Aly both mentioned that the current management of the NMA is working "in crisis mode" with no long term strategies and plans being put in place. "There is a plan on paper but they are only firefighting and all of them have been like that for the past 20 years," Aly stated, questioning the competency of the current leadership for the current phase the NMA is going through. Othman and Amer were even more critical as they expressed that they do not see the NMA going forward, specifically on the convergence side, as they don't see enough effort or will put by the decision makers. "There is no stamina," Amer adds, as he criticizes the current situation as lacking a strategy.

The most striking response was from Heikal, who heads the Media and Culture Committee at the Egyptian Parliament, where he confirmed that the NMA did not present any development plans to the parliament. Heikal further explains that Dr. Hala El Said, Minister of Planning, presented them with the government's vision, but that it is only driven by the fact that the NMA's huge debts are to the National Investment Bank, which is part of the El Said's ministry. But Heikal questions El Said's presented vision by asking "who will apply it?" Amer adds, "whatever was spent on ON or DMC could have turned Maspero around, it's just not a priority." Othman and Aly both point out to the issue of accountability. Aly justifies the management's performance by the job instability, which puts everyone into a "firefighting" mode. "We need a strong crisis team that is capable of taking decisions and get things done," he explains. Othman stresses on the need to have new management with a vision "to do dramatic changes and be accountable for them for a medium long term." El Shaer adds that there is a lack of a "strategic vision that connects between media, economy and technology."

6.3.5 The Current Content

When asked about the current content the NMA produces, the respondents' answers were split between positive and totally negative reviews. As expected, those working for the NMA saw the current content as good and in line with the message the authority has. Lasheen explained that he is not supposed to compete with privately owned channels as he has a totally different message than them. He added that as the state's television he remains conservative in the way he presents the message and that the NMA does target youth and include them in its programming. But, he notes, youth do not watch Egyptian television media altogether now. Azzouz agrees that with the relatively limited budget the NMA has, what is currently being produced is good. Saleh disagrees, saying that the current content does not fit the digital audience and would not be of interest for them. El Sheikh sees the recent development of channel 1 as "a scandal," demanding to look at how much was spent and how much revenue came in return. He stressed on the importance of doing field research before any development to understand why the Egyptian viewer does not watch the NMA's content anymore. "Why are you not getting ads?" he asks and answers firmly "because of the content." Aly goes deeper into the analysis of the content, which he dislikes. He explains that the problem lies within the lack of research behind production. "It is not just a phone call to a guest to come on the show," he adds. He sees that if there is proper research done by knowledgeable and trained producers, it would lead to a "rich screen" that is attractive both in image and content.

Hamdy suggests to turn the NMA into a public broadcaster in the international sense, rather than trying to compete on all genres where privately owned channels are ahead. "Why does the NMA compete on cooking shows?" she asks, recommending to focus on more intellectual content that should be done in an attractive way and is important for "citizenship and

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awareness." She gave examples of her previous work with the German public broadcaster ZDF, where she and her team used to produce short documentaries about unknown artists and craftsmen in Egypt, which in her view, were very interesting to watch and "good content." Othman suggests a similar content strategy, proposing to do educational videos that could very well be attractive to the online community.

6.3.6 The Perception

It is evident that there is a major issue with the perception of the NMA that is negatively associated with political events and previous incidents and being the state's official media. "The platform is damaged, seriously damaged," Amer, who did not know of the NMA's digital presence at all, answers. He and Hamdy agree that the reason why people are not watching, is partly because of the existing perception that does not encourage the viewers to tune in on television or look for the content online. "If you have good content, you might be able to change the perception," Amer explains.

Saleh and Heikal tackle the NMA's perception from a different angle. In Saleh's eyes, the NMA is more of a "social institution that takes care of its employee affairs." Heikal adds that whenever the NMA is discussed, the discussion is more about the employees, their salaries and what to do with them, rather than the content strategy, which should be the NMA's true value. Hamdy questions the NMA's ability to compete unless there is a drastic change, as she asses that "they already lost their audience." Lasheen disagrees and sees that the NMA has "a strong presence and strong content" on digital platforms.

6.3.7 The Organizational Structure

According to El Sebai, until now, there is no official digital media department. He explains that after the law has changed, there is supposed to be such a department within the organizational structure, but its formation is late. This has a negative effect on the workflow of his team, who administratively work at other departments. He further explains that this system is working on an informal basis, but he cannot hold team members officially accountable as they do not report to him as per the current organizational structure. Another obstacle faced by the team due to the delay in the formation of the department is a dedicated budget for their work on digital platforms. The overlapping of responsibilities and authorities could be one of the main reasons of the NMA's weak performance on digital platforms, as well as overall as an institution. "Maspero has to have an administrative rehabilitation," Heikal concludes.

6.4 Opportunities and Barriers to Convergence

Some of the respondents could not identify any existing convergence example in the Egyptian market, but the experts' views varied on the potential for convergence in the near future. El Shaer sees that the "problem lies within management" and everyone secluded in their own "isolated islands." He adds that economic and technical convergence are a must for Egyptian media for it to be able to compete both locally and globally. El Sheikh has the same view on the topic but criticizes the telecom companies in Egypt for not understanding "the importance of carrying media and that it's as important as voice calls." Hamdy mentions few options of convergence between print and online but doesn't consider it as a true convergence example. Amer pointed out that for convergence to take place in Egypt between television and telecom it needs a visionary leader who is willing to take the risk and work for the long term,

which, according to him, is non-existent at the moment. Saleh, on the other hand, stated that convergence is "already happening in the market" with many companies having digital as an integral part of their strategies. Yet, he thinks the digital market is a small one and still has a long way to go.

El Beheiry, CEO of WE, stated that it is content that "will make technology spread" where he explained that people will search for content regardless of the medium and will pay if the content is good. He revealed that WE is planning to have its own IPTV and to introduce triple play to Egyptian households by summer 2019. He added that he didn't think of a possible partnership with the NMA before but sees an opportunity in working with the NMA as an Egyptian company with the biggest heritage of content. He conditions such cooperation with protecting the content from piracy and preventing it from being available on other platforms for free. Othman described such a partnership as a "win-win" situation as WE is the last telecommunications company to enter the market and definitely needs such an exclusive edge. However, he points out, the performance of the NMA in that regard is "very weak and slow," while WE is ready to move fast so as not to miss on any opportunities. El Sebai, at the other end, said that he talked to the marketing team at WE before but the meeting did not lead to anything serious. In his view, the other side viewed the opportunity as a simple barter deal of internet services in return for free advertising for WE on the NMA's channels. Azzouz seemed open to cooperate with WE as well as all the other internet service providers.

6.5 Regulatory Convergence

The respondents' concerns over the media legislations that do not put digital media into considerations, raises a red flag about the readiness of government bodies for regulatory

convergence. "Convergence is ahead of legislations," Saleh explains. The way his company deals with the situation is using international agreements with their service providers until there is a law to cover the different issues pertaining to digital media. El Shaer names the current phase as the "post Ministry of Information phase," where institutions are being rebuilt, creating a lot of confusion when it comes to laws and provisions. Heikal, sees that there is still a long way for regulatory convergence to take place to cover cross-industry convergences. He explains that the current draft law, when received from the government, did not include digital media. Therefore, the Culture and Media Committee worked on it and redrafted over 100 clauses and added special clauses for digital media. Still, he admits, there are still areas within digital media which are not fully covered by the law.

6.6 The Recommended Model

6.6.1 YouTube vs. Platform

Most of the respondents agreed on the strategy to have a VOD platform for the Egyptian public broadcaster. "Maspero must invest in its own platform as part of a national project to reform the Egyptian media," stated El Sheikh. Hamdy sees that a "Netflix like model" would be a good base given the huge back catalog the NMA has. Saleh reconfirmed the importance of having a VOD, rather than posting content on YouTube, which is a server that is not controlled or owned by the content owner. Amer, Aly and Othman see that the NMA should work on the content first, develop it, and then move a separate VOD when the content has enough viewers and followers." It would a waste of effort and everything to do [the current] content on a modern platform," Amer added.

With regards to the high financial cost of buying CDNs and building the infrastructure for the VOD, El Sheikh explains that it is an investment that could be done with less than 1 million USD, which is a relatively low cost given the strategic importance of such a project.

The VOD, most respondents said, could be a subscription based model. Saleh sees that people will adapt to paying for content if it's good, and recommends offering different packages. Aly agrees by saying "if you create the need, people will pay." He gives the example of the beginning of mobile phones in Egypt and how today they are indispensable to people regardless of their socio-economic background. Hamdy suggests a model similar to the Hulu one discussed in Chapter 2, which is based on a low subscription fee that includes some advertisements, to have the latter "make up for the low fee."

6.6.2. The Public Broadcasting Fee

According to all respondents who either work or used to work at the NMA, the public broadcasting fee is not being applied and the proposal to reinstate it was never accepted throughout the years due to concerns of the public reaction to it. Heikal points out that in 2011 the fee was close to being introduced and would have generated almost 9 billion LE, but the Minister of Electricity objected due to his existing experience with collecting a garbage fee, which resulted in a collection problem of the sum of the electricity bill. The fact that the NMA is known for its debts and losses is another factor that some respondents mentioned on why this tax was never re-introduced. This was also Othman's view as he stated that "people will pay to solve my problems, I will spend all the money again and come back to say there is no money." Today, the parliament is hesitant to discuss the issue due to the current dire economic conditions Egypt is going through, according to El Shaer. Hamdy confirms that Egyptian will never watch state's

television again if another tax was imposed. Azzouz stresses on the necessity of studying this issue very well before introducing it, fearing the reaction of the less fortunate segments of the society.

In concept, most of the respondents agreed to the importance of having some sort of a fee introduced again, but on the condition of having good content. "You have to present people with something first," stated Othman. El Sheikh goes back to the point of exclusive content and that without it, people will not watch and will never pay to watch the NMA. Saleh confirms this view as he reassures that people will pay for content if it is good. Amr and El Shaer see a fee as essential for the NMA to develop into a real public broadcaster. "It secures the independence of the public broadcaster," El Shaer explains. Amer questions if the authorities really want to see an independent media institution in Egypt. He elaborates that by getting the funding from the public "the public is the master," and thus the relationship with the authority changes. This is similar to the model the BBC follows, which depends mainly on public funding and thus is considered an independent media institution. The Japanese public broadcaster, NHK, also functions though a financial model that depends on a license fee by 95% (Kashimada, 2018).

Chapter 7: Conclusion and Recommendations

Based on the aforementioned insights and expert opinions and to answer both RQ2 and 3, I am proposing a two-phase strategy that depends on exploiting the potential of the back catalog the NMA possess, while working on the different pillars needed to establish a successful model for the Egyptian public broadcaster's content on digital platforms. By the end of implementing both phases, the Egyptian public broadcaster should be able to compete with privately owned satellite channels on digital platforms, depending on the content it produces.

7.1 Phase 1 - Putting the House in Order

7.1.1 Technically

The first phase of the digital strategy for the NMA should start by thoroughly auditing the current assets on the different platforms and ensuring the maximum optimization is reached for both reach and revenues. This is essential in order to maintain and grow the current modest fan base of followers and subscribers, while at the same time maximizing the current revenue stream that is not of any extra cost to The NMA as it highly depends on The NMA's back catalog of drama and old content of *Maspero Zaman* channel on YouTube. This includes the following steps:

- Identifying all social media assets of The NMA on all social media platforms. This will entail deleting YouTube channels that were created by single shows or with individual efforts, as well as merging pages on Facebook and reporting and deleting all illicit ones. Lastly, all assets should be verified in order to build more credibility for the assets and prevent having pages/channels that pretend to represent The NMA in the future.

- Collecting content - One of the major issues mentioned by several respondents, including those who work at the NMA is that The NMA's content is everywhere on the Internet due to a long history of neglect. A key step to having a strong digital back catalog is collecting and properly archiving all content - both old and new- and all information related to it, which shall be used in categorizing it and will later constitute the metadata used for optimizing the content online. All rights to the collected content have to be revised with the legal department within the NMA to ensure The NMA owns the rights to that content, both IP, video and audio publishing rights. This shall be followed by digitizing all material into formats that can be published to the Internet as well as archived onto a main server.

- Corporate identity - Aside from the unattractiveness of the current channels' logos to the younger audience who is the majority of Internet users in Egypt, no unified corporate identity and look and feel can found in the different social media assets of The NMA. A new fresh corporate identity should be created and applied with clear brand guidelines to all social media assets and online channels to reflect a professional and up-to-date image to the users.

- Optimizing content - Amidst the clutter of content online, only the well optimized content stands out in any online search. Proper search engine optimization (SEO) is needed constantly to improve The NMA's content appearance and ranking within search results. This applies to all video content on Facebook and YouTube and starts with putting comprehensive metadata (collected in the previous step) into the description and tags of each video, and ends with choosing the right title that should help with the search results ranking as well as attract the viewer to click and watch.

- Repackaging content - Looking at Egyptian satellite channels performance on social media platforms, content can be recycled several times, generating more views, interactions and thus revenues. This is achieved through editing shorter clips from longer videos to highlight certain topics or scenes, such as breaking news, exclusive footage, music, comedy scenes, or historic moments. The NMA's back catalog has a lot of potential in that regard given the huge amount of exclusive historical footage as well as Egypt's most popular drama, which is still heavily watched in full format according to numbers discussed in the literature review chapter. By only editing the existing content, the revenue generated would be maximized.

- Monetization efforts - Although that YouTube is the most popular source of generating revenues off online video content, there are many other platforms where the old and new content can be monetized. For example, a lot of content that the NMA supposedly owns the rights to includes music, which can be published on music platforms such as iTunes and Anghami and generate revenues from those platforms. Despite that the revenue numbers were not shared by any of the respondents of the NMA, it is expected that monetization can be increased in many ways with the current content catalog already.

- Copyright protection - the last key element to maximizing revenue, views and catalog value is protecting it from online piracy. If all previous steps are executed, reference files with the proper rights would exist on the different digital platforms and thus facilitate automatic protection of copyrights through blocking an illicit video or audio content that belongs to The NMA. This will also be a first step into phase 2 of creating a solid library of content that can be used in a converged institution explained later in this chapter.

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7.1.2 Structurally

According to Ahmed El Sebai, who heads the digital team at the NMA, there is no digital media department at the NMA yet, which hinders a lot of the workflow as well as the decision making process. The current team needs to be assessed for digital media knowledge and capabilities and accordingly be hired according to a solid team structure that is part of the main organizational structure of the NMA. Rather than hiring new members to the team, part of the work should be outsourced to specialized companies, at least for the first few years, until the existing team has the necessary know-how to continue working seamlessly with such a huge amount of content and social media assets. The head of the digital department, who will naturally be responsible for the convergence with the NMA, has to be an expert in the field and needs to be on the board of the NMA to ensure that the digital strategy is an integral part of the NMA's plans and vision for the future.

Figure 11 below outlines the department structure that covers all of the needed functions for a digital content management and marketing team. The functions are segmented into five main functions namely, technology, content creation, Search Engine Optimization (SEO), media buying and advertising sales, lastly research. Highlighted in red are the ones that could be outsourced for the first few years since it will be very difficult to find matching calibers within the NMA to perform the needed tasks.

The technology team will be responsible for the website and applications development, maintenance and administration. The same function will also be responsible later on for the VOD platform and the technical part of content distribution platforms with other partners such as telecom operators. This function is highly technical and requires a lot of experience and thus

cannot be performed by the current NMA staff. That is why outsourcing it is highly recommended to guarantee the desired outcome of high quality user experience.

As for the content creation team, this function will be the basis of all of the content with its different types across digital platforms. The content creators will create content from the existing material as well as all of the new content being aired on a daily basis. They shall also curate content from other business lines of the NMA, such as magazines, the news bulletin and others. This team will be closely working with the program producers in the different channels, where each channel or group of programs will have an assigned content creator from the digital media team that connects with them on a regular basis.

The community managers will be responsible for keeping all social media platforms interactive and responsive to fans and viewers. This role is key to keep and increase the reach of social media accounts and preserves user engagement. A small team of designers will be needed to support content creation and maintain the same identity and brand personality in all outgoing content. The content uploaders and editors are responsible for editing all video content and uploading them on a regular basis on YouTube for the first phase, and onto the VOD platform for the second phase. Within this team, uploaders will also be responsible for archiving and indexing the video library in order to make it easier to pull out any video asset off a central server that serves all of the NMA.

The SEO and media buying functions are the two main functions to be outsourced. While they might not be as technical as web development, but having them fulfilled in the best capacity in the first phase of vital importance to make sure the current content and back catalog are fully optimized and thus achieve higher reach and revenue. This includes SEO specialists, keyword researchers, as well as analysts who measure traffic and performance. The media buying and

advertising team will be leading both the marketing and sales operations, owning the commercial part of the process. This includes campaigns on social media for the NMA's own content, as well as packaging content for potential sponsors and advertisers.

Lastly is one of the most important functions in any media or digital media institution that is completely neglected in the current organizational structure of the NMA (see Figure 11) namely, research. This function shall serve both the online content creation as well as the one for television where researchers would monitor and track the trending topics that would manifest the intermedia and reverse agenda setting discussed in Chapter 3. The research team would be segmented by genre, meaning that there should be a research for every genre the NMA produces, such as sports, politics, children, entertainment and others. The analysts would monitor the performance of not only the NMA's content, but also that of other broadcasters and media institutions to continuously develop the NMA's online content strategy accordingly. They will have an even bigger role with the second phase when the VOD platform is launched as the data they provide will be used to optimize and develop the user experience further.
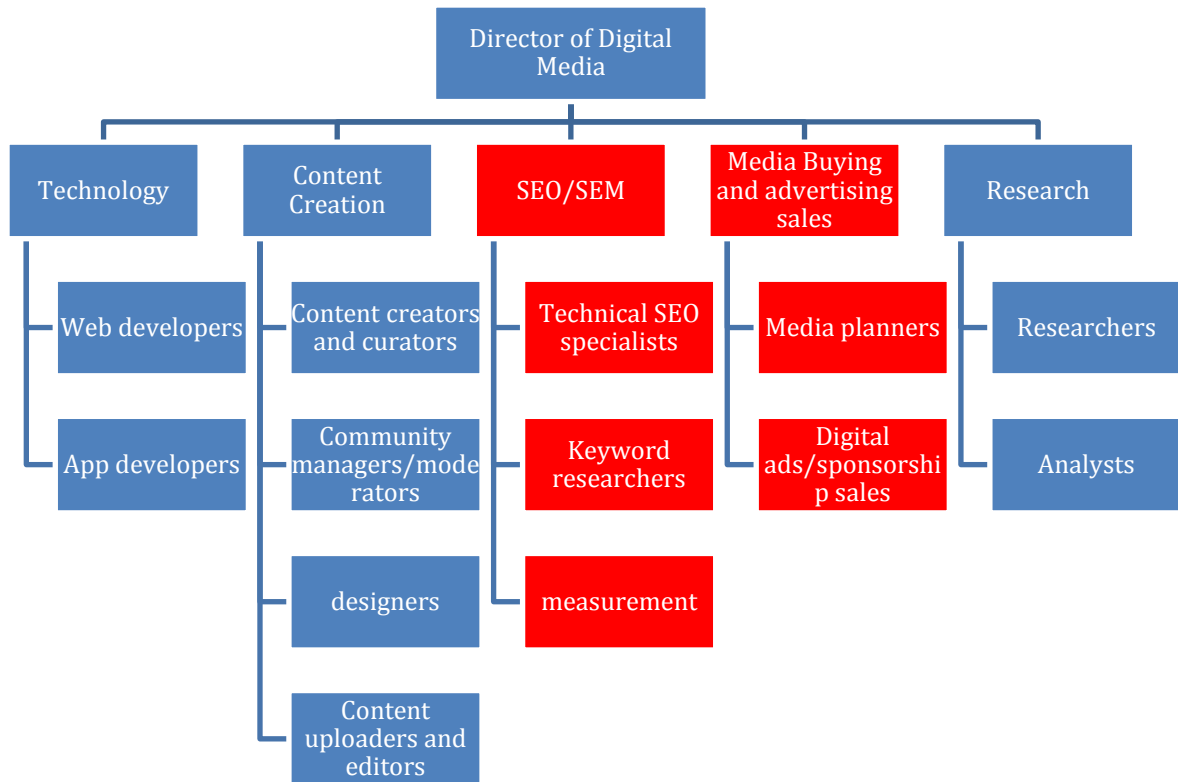
Figure 11- Proposed digital media function structure at the NMA

In her article on the governing structure of the Egyptian broadcasting system, Allam outlines the current organizational structure of the NMA through the below figure (Figure 12) and criticizes the fragmented specialization of each function coupled with the centralization of decision making, which results in a stagnant organization (2018). Therefore, she recommends a "flatter structure" in order to decentralize the decision making process and thus have the NMA enabled to move faster according to the industry dynamics (2018, p.6). According to my interview with Ahmed El Beheiry at the NMA, the structure is expected to change in the near future after the creation of the executive regulations governing the new media bodies. But building on the current structure, the digital media department shall be one of the main functions, in this case "Central Divisions" that reports directly to the GM of the Board of Trustees (see

Figure 12). The department's content creation team would be in direct contact with the content creation teams within the divisions for Channel 1 and 2, as well as the specialized channels, in order to maximize the relevancy of content for both online and offline audiences and to be able to drive traffic across both platforms.
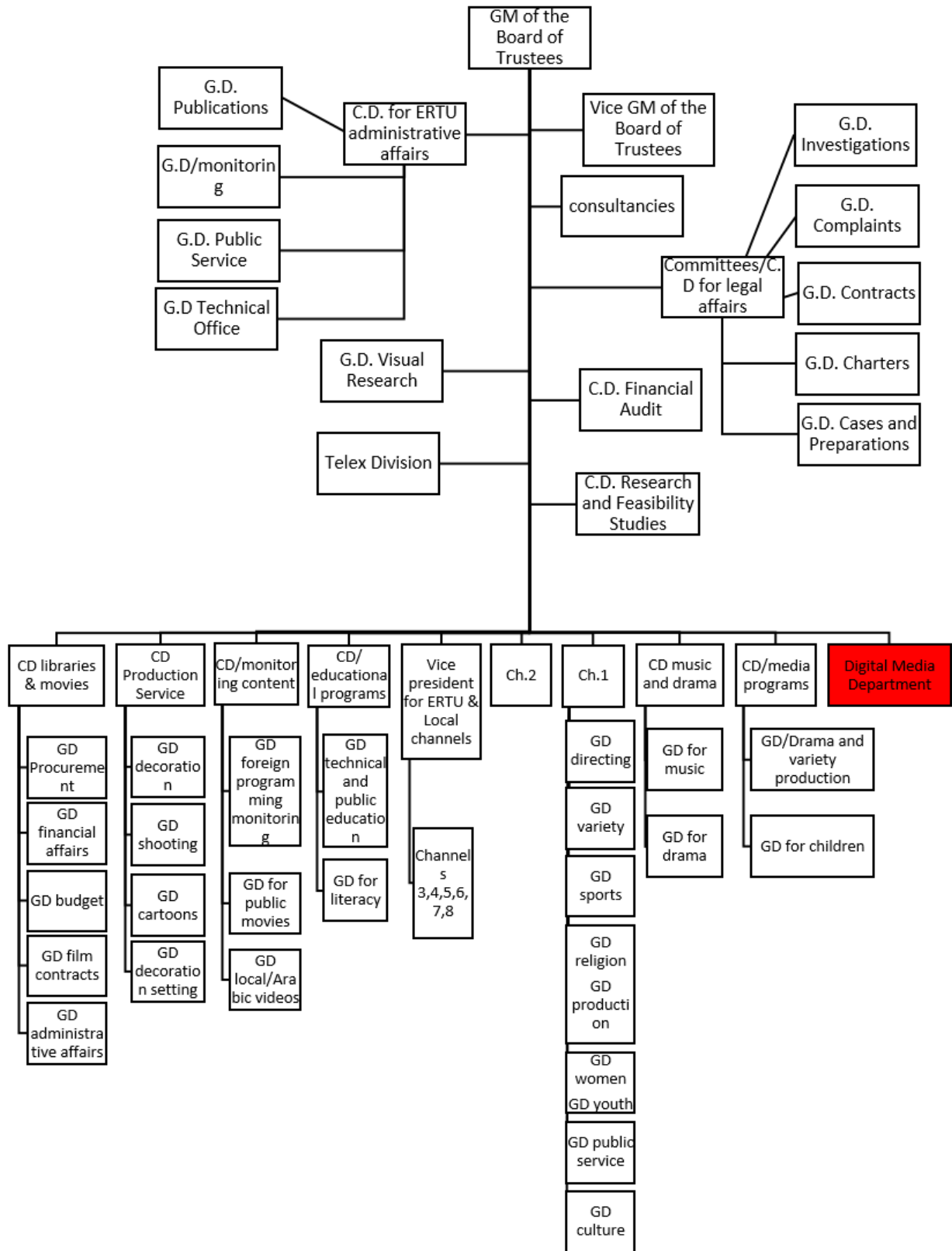
Figure 12 – Organizational Structure of the NMA with the new digital media department

Within the digital media department or division, I am proposing the below process for work (Figure 13). As digital content creation requires constant measurement, analysis and development, the process forms a cycle that should be constantly repeating with seven integral parts in the following order: research, content creation, uploading and publishing, optimization, community management, advertising and analysis. As for the technology and advertising sales functions outlined in Figure 10, their work shall be continuous regardless of the content creation and management cycle.
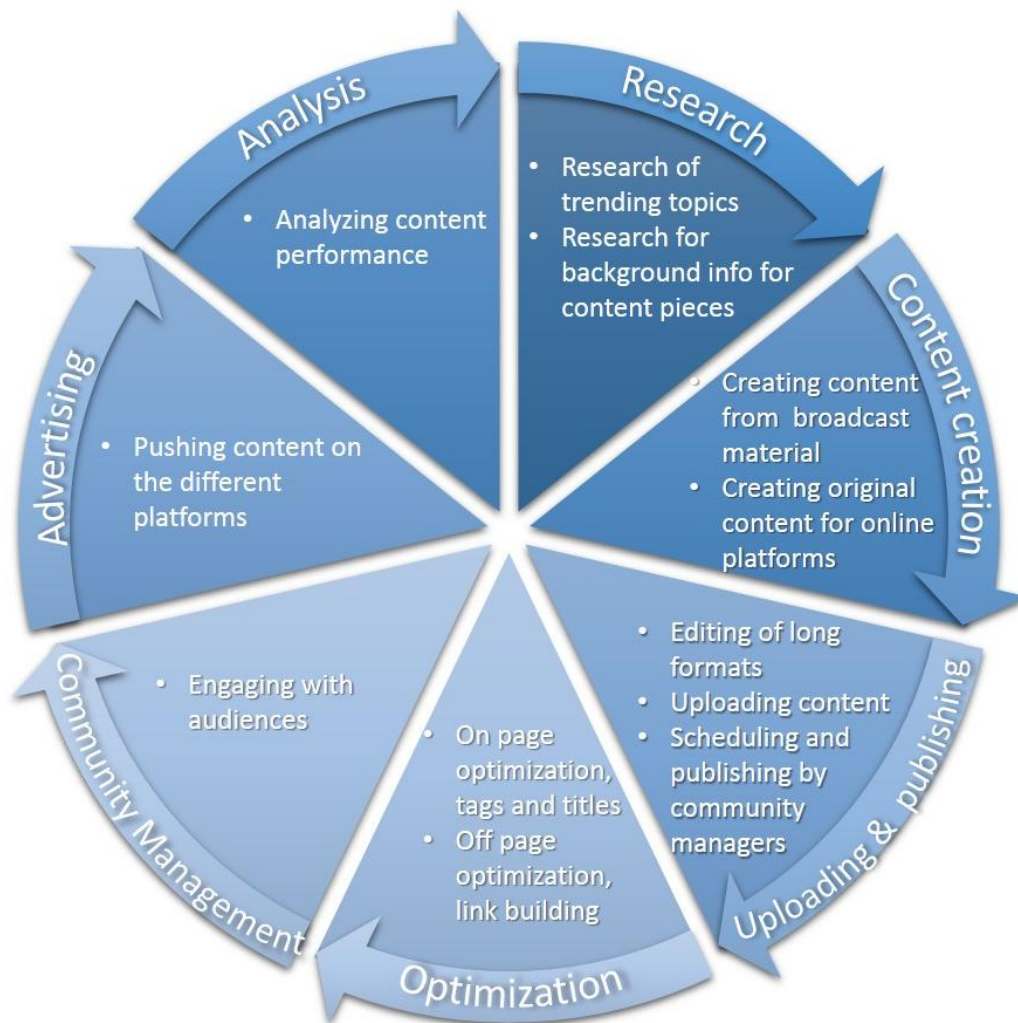
Figure 13 – Proposed process for the Digital Media Division

7.2 Phase 2: The Real Convergence

According to what most the respondents agreed to, for the long term, a strong dedicated VOD platform should be established. This goes in line with the model the three biggest European public broadcasters follow, namely BBC in the United Kingdom, the French public broadcaster and ZDF in Germany. All of them have their own players where their content can be exclusively watched. Transforming the NMA's content into such a platform requires planning on different fronts, namely technological, financial and most importantly the content strategy, which are all discussed below:

7.2.1 The Technological Model

Looking at previous experiences around the world of both commercial and non-commercial VODs such as YouTube, Netflix and BBC, it is imperative to tackle the centralization of data in one local server, which, as mentioned in the literature review chapter, is a huge barrier to scalability and affects the quality of streamed content. The aforementioned global players rely on a mix of cloud based technology and content delivery networks distributed across the ("Over-the-Top", 2015). While some have their own clouds and their own clouds and CDNs, others are buying capacity from specialized CDN providers around the world ("Over-the-Top", 2015), which is what is recommended for the NMA, at least for the initial launch phases given the high financial cost required to own CDNs around the world. Once the global reach has been extended enough, an investment in owned clouds and CDNs can be studied. This model is the one adapted by the BBC, which, according to Frederico Benedetto, Product manager at the BBC, is a mix of CDNs, with some of them being commercial CDNs that BBC buys capacity

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from (2016). For the initial phase targeting the Egyptian market, local owned CDNs should be used to cover and flawlessly stream to the Egyptian audience.

The next step of technological convergence is to control and secure the last part of the content delivery process, namely the internet connection, which is another barrier to convergence in Egypt. As VODs are competing against traditional television, a main disadvantage in Egypt is not only access to the Internet as compared to ease of access to traditional television, but also the data internet costs in the MENA region in general and in Egypt in particular. Viewers do not only have to have the proper infrastructure to view the quality of the content provided on VODs, but also have to be able to afford it as their main source of video consumption, especially with free-to-air content on privately owned satellite channels. Therefore, the recommended model is a "managed service" where the provider "has control over the fixed or mobile access network used for its distribution" and thus can guarantee the quality of the service provided down to each individual or household ("Over-the-Top", 2015). Here, comes the importance of technological convergence with a telecom provider. Offering IPTV as part of their services, a VOD with rich and exclusive content is a competitive advantage for any telecom operator in the market that shall attract more customers and converge today's telecommunications companies in Egypt into the era of triple play and quadruple play. Partnering with one of the operators in Egypt would not only overcome the financial barrier - discussed later- but more importantly the accessibility barrier through controlling the quality of the service through an owned distribution network. This is the same model followed by Deutsche Telekom (DT) in Germany, which has a video-catch up service as part of its package, and thus the necessary network capacity to consume that content is guaranteed by DT to its subscribers ("Over-the-Top", 2015).

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The strongest candidate on the Egyptian market is Telecom Egypt, given their market share amongst internet service providers, as well as their fiber optics network, which would secure the content delivery part of the model. In addition, it is 80% owned by the Egyptian government, so convergence should theoretically be smoother as a process. This is coupled by the information given by Ahmed El Beheiry, CEO of Telecom Egypt, who, during my interview with him, explained that having IPTV is a main priority for the company within the next year. He also expressed interest in partnering with the Egyptian public broadcaster given its huge back catalog that he sees as a huge advantage. However, such a partnership is conditioned by protecting content and removing all pirated content off other platforms, which makes the aforementioned steps in phase 1 of utmost importance.

7.2.2 Content Strategy

Once the content is protected and has garnered views and revenues on YouTube, some of it shall be made exclusive to the platform, while snippets should be left on YouTube to attract audiences to keep watching the full videos and thus migrate them to the VOD. YouTube will be later used as a marketing tool to promote the content on the NMA's VOD, and will still generate a considerable amount of revenues.

Exclusivity will be first achieved through the back catalog, which is the main strategy component. This strategy was pioneered by Netflix in 2014, who put exclusive content as a priority over wealth of catalog in its offering (Shrama, 2016). The same model is currently followed by most privately owned satellite channels who rely on exclusive digital rights to the content their online channels carry, thus maximizing the views count as well as the digital revenues for the channels. The exclusivity factor was also mentioned as a key component for

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success by some of the respondents, most notably industry veteran Osama El Sheikh and Ahmed El Beheiry, CEO of WE.

The last part of the content strategy is to start producing content that is exclusive to the Internet. Such content will be different in length, tone of voice, and therefore will require young and fresh talent to work on it. This will greatly emphasize the exclusivity part, not only in terms of content, but also the channel it is being published through. Content dedicated for the online community will also cater to the younger audiences who have been neglected for a long time by the Egyptian public broadcaster and will also help in changing the perception of the NMA amongst the different segments of the Egyptian audience. As Saleh has mentioned, all channels are producing for television and just putting it on online platforms. Such a step of producing digitally exclusive content will be a great competitive advantage on the market.

7.2.3 The Financial Model

To migrate from a free model to a subscription based model in light of the current perception of the NMA and its content will lead to the loss of the current audience the NMA has on YouTube. In addition, they will not migrate to the platform for *only* the back catalog. So as long as there are new exclusive titles and productions available on the platform, access should be free of charge in order to gain the highest possible number of views and subscribers possible. To compensate for the lost advertising revenue from YouTube, an ad-based model should be implemented during this phase, similar to the YouTube model.

Here, financial convergence with Telecom Egypt would be really beneficial. For exclusive titles that are important, a pay-per-view model could be implemented, where access to the video would be given in return for a small fee that could be collected through one's internet

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service provider or telecom operator. Once more exclusive and new titles are provided, the VOD could fully migrate into a subscription based model where a small fee is collected through the monthly bill or directly deducted from the pre-paid card credit. Here, financial convergence with Telecom Egypt not only overcomes the issue of collection, but also bypasses the problem of credit card penetration in Egypt and the trust issue the market has with giving credit card information online. This model secures financial benefits of the digital strategy on top of its strategic importance in terms of reach and positioning for the Egyptian public broadcaster. It would also be a safer solution as compared to imposing a public broadcasting fee, which according to all respondents, will be of extreme negative consequences if applied amidst the current economic conditions in Egypt.

7.3 Limitations and Further Recommendations

One of the major limitations to this research was access to NMA officials to gain more insight into their plans for the NMA, as well as to understand their views on convergence and the NMA's presence on digital platforms. Their contact information is not available through email or a website and contacting required searching through personal contacts or acquaintances. Many of them were contacted but didn't confirm, reflecting a limited interest in the topic.

Moreover, many of the experts interviewed were skeptical about a digital strategy being a priority for the current management at the NMA and questioned their ability to have a vision for it, which makes the probability of the proposed model in this study to be implemented very low.

Another limitation to this study was the availability of updated data on Egyptian media in general both online and offline. All data used in this study is based on global numbers or MENA numbers, with Egypt rarely singled out in research with concrete numbers. Accordingly,

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viewership of traditional television could not be measured and also the NMA's status in comparison to privately owned satellite channels cannot be determined, except through perceived volume of advertising on private channels, thus giving the impression of their impact and popularity. This limitation extends to the online platforms, where again, there are no reports on digital video consumption in Egypt, its growth or trends, making this study based on more global and regional trends, while the latter might be affected by the high internet penetration and speeds as well as market growth in countries such as KSA, the UAE and Qatar.

This study could act as a starting point for further research into the topic that is concerned more with the technical and financial aspects of the video platform in specific and the digital presence in general for the Egyptian public broadcaster. Media management related studies could further expand into the organizational structure of the digital media team, its relation with other divisions. This includes a study of the current organizational structure of the Egyptian public broadcaster and how to integrate digital orientation within all processes of operation, primarily the way content is produced. Before implementing the recommended model, further research needs to be conducted on the existing caliber within the NMA and their ability to support and implement it.

Further field studies could also be conducted to find out the viewing habits of the online community in Egypt, the type of content it searches for, if it is willing to pay for content and how much it is willing to pay for it. This would greatly help is setting a financial model that is derived from the Egyptian market and thus has a greater success probability.

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Appendices

Appendix A - List of Interviewees

From NMA:

#	Name	Position	Date of first contact	Method of contact	Date of interview	Type of interview	Interview status
1	Hussein Zein	Chairman	24/5/2018	Phone call			No answer to calls or messages
2	Dr. El Sayed Azzouz	Board member and head of spectrum management at National Telecom Regulatory Authority of *Egypt* (NTRA)	7/6/2018	Phone call	11/6/2018, 12 pm	Face to face	conducted
3	Dr. Mhamoud Alam El Din	Board member of the National Press Authority	6/6/2018	Phone call	Call again on 7/6/2018		No answer
4	Magdy Lasheen	Head of the Egyptian TV	25/5/2018	Phone call	29/5/2018	Face to face	conducted
5	Dr. Suzanne El-Keliny	*Dean* of the Faculty of Arts, *Ain Shams* University and board member of the Supreme Council for Media Regulation	24/5/2018	Phone call	28/5/2018 At 3 pm	Face to face	Didn't reconfirm or answer the phone, have to reschedule
6	Ahmed El Sebai	Editor-in-Chief of Maspero's portal			Wednesday 6/6/2018 at 3pm in Maspero	Face to face	conducted

From TE/We:

	Name	Position	Date of first contact	Method of contact	Date of interview	Type of interview	Interview status
7	Magued Osman	Chairman of Board representing the government	6/6/2018	Phone call	12/6/2018, 11 am,	Face to face	conducted
8	Ahmed El Beheiry	Chief Executive Officer	24/5/2018 25/5/2018	Phone call message	30/5/2018 at 12 pm	Face to face	conducted

From regulatory bodies:

	Name	Position	Date of first contact	Method of contact	Date of interview	Type of interview	Interview status
9	Makram Mohamed Ahmed	President of the Supreme Council for Media Regulation, and Chair of the permissions committee	7/6/2018	Phone call	Call his office on 10/6/2018 to set a meeting		No confirmation
10	Osama Heikal	Chair of the media and culture committee at the Egyptian parliament	28/5/2018	Phone call	Sunday 3/6 at 1:30 pm 9 عبد القادر حمزة، جاردن سيتي	Face to face	conducted

Experts:

	Name	Position	Date of first contact	Method of contact	Date of interview	Type of interview	Interview status
11	Dr. Sherif Hashem	Deputy CEO for cybersecurity, NTRA	28/5/2018	Call and email			declined
12	Dr. Hassan Aly	Dean of the School of Media at Suez	28/5/2018	call	فى 11/6/ 2018	Face to face	conducted

		University			استراحة جامعة المنيا خلف الرقابة الإدارية		
13	Osama El Sheikh	Former Chief Executive Officer- Egyptian Media	20/6/2018	call	30/6/2018 at 12 pm	Face to face	conducted
14	Hossam Saleh	Chief Operating Officer - Egyptian Media	27/5/2018	email	31/5/2018 at 12 pm	Face to face	conducted
15	Rasha Allam	Professor of Journalism and Mass Communication, The American University in Cairo	13/6/2018	email			Emailed twice, no answer
16	Naila Hamdy	Professor of Journalism and Mass Communication, The American University in Cairo	13/6/2018	email	20/6/2018	Face to face	conducted
17	Dr. Gamal El Shaer	Scholar, and Deputy of the NMA	6/6/2018	call	7/6/2018 at 4 pm	Phone interview	conducted
18	Sherif Amer	TV host	22/6/2018	call	27/6/2018	Face to face	conducted
19	Mohamed Shouman	Dean of Communications & Mass Media, BUE	23/6/2018	email			No answer
20	Naglaa El Emary	Professor of Media and Journalism Studies, BUE	23/6/2018	email			No answer
21	Essam El Amir	Former Chairman of ERTU	27/6/2018	call		Face to face	No answer

Appendix B - Interview Questions for NMA Officials

1. How do you see the current digital media scene in Egypt?
2. How do you see local and regional competition on digital platforms?
3. What is Maspero's plan to compete on digital platforms?
4. What are the current financial resources of Maspero?
5. What are Maspero's current digital assets on the different platforms?
6. What happened to the broadcast fee that was added to the electricity bill?
7. Does digital contribute to the revenue of Maspero?
8. Who is responsible for setting the content strategy for Maspero on digital?
9. How do program producers and digital teams work together
10. What are the training and development plans do you have or have had for the digital team in Maspero?
11. Do you advertise for your channels and/or your content on digital? If yes, on which platforms and what is your target audience?
12. How do you measure the effect and reach of your programming?
13. Other than digital, what is your marketing plan for the younger audience who are a majority in the Egyptian population?
14. How do you see opportunities to cooperate with other institutions in the media or communications industries for the Egyptian public broadcaster?
15. What do you see is needed for Maspero to be able to compete on digital platforms and reach more audiences?
16. What obstacles -if any- do you see for Maspero to have a strong presence on digital platforms?

Appendix C - Interview Questions for TE Officials

1. What is the plan for fiber optics coverage and Egypt and how will it affect internet speeds within the next three years?
2. What is the deal between you and Shahid and how successful has it been so far? (Can you share numbers or percentage of those who subscribed to it because of the promotion?)
3. Is it part of your plan to offer triple play? If yes, who is your content partner?
4. Are there any other content providers you cooperate with?
5. What are your plans - if any- for cooperation (convergence) with other technology or content providers?
6. Do you see a possible partnership with you and Maspero as a content provider?
7. What is your capacity to own and operate content delivery networks (CDNs) ?

Appendix D - Interview Questions for Regulatory Bodies

1. What are the current laws that govern digital/online media in Egypt?
2. How have laws changed to accommodate the convergence between different media types such as print and online video? Or television and online video?
3. Where does digital fall in the plan for Maspero's revamping and development?
4. How does the government currently protect copyrights online? What are the governing laws and how are they enforced?

Appendix E - Interview Questions for Experts

1. How do you see the current digital media scene in Egypt?
2. How do you see local and regional competition on digital platforms?
3. What is your evaluation of Maspero's recent development plans?
4. How do you see Maspero's performance on digital platforms?
5. What do you see is needed for Maspero to be able to compete on digital platforms and reach more audiences?
6. What do you think is the best model for publishing the content of Maspero on digital platforms? On an independent player or continue on YouTube? Subscription based or ad based or free?
7. What do you think of the public broadcasting fee to be applied to Egypt again?
8. How do you see convergence between different industries such as media, production, and technology or even within the same industry in Egypt? Do you see successful examples? What are the opportunities you see? And what are the obstacles?

Appendix F - Consent form

THE AMERICAN UNIVERSITY IN CAIRO
INSTITUTIONAL REVIEW BOARD

Documentation of Informed Consent for Participation in Research Study

Project Title: *Advancing the Egyptian public broadcaster to compete in the digital era*
Principal Investigator: *Maha Nagy - mahanagy@aucegypt.edu*

*You are being asked to participate in a research study. The purpose of the research is examining the strengths and weaknesses of the current digital presence of the Egyptian public broadcaster and providing recommendations on how it can be advanced to compete on digital platforms, and the findings may be published or presented in relevant academic databases. The expected duration of your participation is 30-45 minutes.
The procedures of the research will be as follows; you will be asked to participate via phone or face-to-face, and upon your confirmation an interview date and time will be set at your convenience. The interview will be conducted face-to-face or on the phone.
*There will be no risks or discomforts associated with this research.

*There will be benefits to you from this research. As the research aims to put a policy for the Egyptian public broadcaster to compete digitally, the results can be used as a guide for your future work with the National Media Authority (Maspero).
*The information you provide for purposes of this research is not confidential and not anonymous. If you wish to keep your identity anonymous, please mark the corresponding box below.

*Questions pertaining to this research should be directed to Maha Nagy via email at mahanagy@aucegypt.edu or via phone at 01005857070

*Participation in this study is voluntary. Refusal to participate will involve no penalty or loss of benefits to which you are otherwise entitled. You may discontinue participation at any time without penalty or the loss of benefits to which you are otherwise entitled.
ð   I confirm that my name and occupation can be used in the research results
ð   I do not wish to reveal my name and occupation in the research results
Signature   _____

Printed Name   _____

Date   _____

Appendix G - Email interview request

Dear……,

My name is Maha Nagy and I am currently a graduate student at the American University in Cairo working on my master's dissertation titled "Advancing the public broadcaster to compete in the digital era". The purpose of the research is examining the strengths and weaknesses of the current digital presence of the Egyptian public broadcaster and providing recommendations on how it can be advanced to compete on digital platforms.

My advisor is Dr. Hussein Amin and he recommended that I talk to you about the topic given your extensive expertise in the field.

If you are interested and have the time, I would really appreciate if I can meet you as soon as possible for a short interview that will not take more than 45 minutes of your time.

Thank you.