“Financial” Aspects of Spotify Streaming Model

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***Abstract* - The aim of this paper is to analyze the business model and financial results of the Spotify music streaming platform. The digitalization of production processes has directly affected the development of new media industries. The old media industries developed in the model of mass media and limited media markets. New media industries are associated with technological progress and the digitalization of production processes. The digitalization and convergence of production and distribution processes has directly affected the complete paradigm shift in the development of new media industries. The music industry was among the first to enter the process of transformation. The production and distribution of physical sound carriers has been replaced by streaming music platforms. The purchase of physical sound carriers in "brick and mortar" stores has been replaced by subscriptions on the streaming platform. Spotify is the largest global streaming music platform. It generates the highest revenue and has the largest number of subscribers. The strength and impact of the Spotify platform on the global market is evidenced by the emergence of the term “spotification”, which is used for all similar business development models.**

Key words - music industry, Spotify, streaming industry

I. INTRODUCTION

Spotify is an audio streaming platform for broadcasting music. It is organized as a platform to access the Internet and choose how to use the service. There are two basic ways of using: a) an approach that allows a limited time of using the service accompanied by advertisements and b) a subscription agreement that allows personalization of the service without advertising content. Personalization of the service or subscription relationship means creating your own music lists with songs that the user wants to listen to, recommendations to other users as well as receiving recommendations from users with whom he communicates. In practice, „streaming“ service – refers not simply to a distribution technology, but also to a technology of surveillance (as it allows precise monitoring of individual media consumption), and to a business model on subscriptions [1]. The Spotify application enables monitoring of podcasts with notifications and limited communication between users and subscribers. Although it has some characteristics similar to radio stations from the "old" media industry, such as a podcast or a music number on demand. Spotify is organized in a platform economy model and is fully oriented to the high technology market and the "new" media industry. The organization of production in the platform model is divided into two basic forms. The platform can be organized as a moderate product development process or a moderate ecosystem building process [2].

Production-oriented platforms are based on engineering design, the production of physical products, and the use of economies of scale and economies of scale [3]. The ecosystem perspective portrays platforms as the hubs of wider business systems that facilitate, coordinate, and control exchanges between multiple organizations [4]. There was s shit in the early twenty-first century to the personal computers and mobile digital playback devices such as Apple iPod as the prevalent ways of consuming music [5]. Ever since this service was launched in 2008, Spotify has also frequently served as a metaphor for a model that is supposedly is not limited to music, but replicable in a wide range of media industries and cultural forms [1]. By 2010, it already had 10 million users. The first headquarters were registered in Luxembourg, but business operations were managed from Stockholm, Sweden. Around year 2010-11 a shift was clear in the Swedish discourse about new business models. The analogical meaning of Spotify drifted away from the advertising-based model, towards the subscription-based model [1].

The application is adapted for all operating systems and includes a wide range of content browsing capabilities. Music numbers can be searched by author, song, album, record label and other. The user application meets the standards of iOS, Android, Linux, and is used equally successfully on MacOS and Windows computers. In addition, the adaptation of the application to all types of smartphones and PDAs, or to all operating systems they use, has directly affected the global growth and popularity of the corporation. In the fourth quarter of 2019, Spotify had 248 million visitors within a period of 30 days or one month. Spotify categorizes with digital service platforms without a proprietary device that, as its core service, mediates service exchanges exchange between commercial content producers and end-customers [6].

II. LITERATURE REVIEW

This digitalization of music has evolved through a series of transformative phases; from vinyl’s to CDs, from CDs to mp3s and from mp3s to streaming services. Each such phase has involved a rearranging of the socio-technical infrastructure of music, affording new modes of production and consumption, similar to previous shifts in music technology [7]. Simon (2019) gives an overview of the development of technology within the music industry, ranging from the development of radios, through the industry of vinyl's, sound recording tapes, CDs, computer memory discs to modern streaming services. Up to 2000 the music industry was focused on physical sound carriers. Sales of sound carriers grew until 1984, culminating in 2006 [8]. Each of the stages of development introduced new changes in social relations and the way of consuming musical content.

With the development of smartphones, MP3 audio players, tablets, laptops and other technologically advanced devices, users have easy access to music and other media content. More importantly, users are given access while on the move which was a significant step forward in the development of the music industry [9]. Digital music provides the ability to overcome some of the limitations of physical recordings by extending their length and expanding access to recordings. However, what was once a social / cultural aspect of listening to music has diminished by allowing access to large databases of already recorded music [10]. The development of music technology has led to an increase in mobility and accessibility and has gradually given consumers increased control over music content. Many of the changes associated with the digitization of music precede digitization in other industrial sectors [11] [12]. Listening to music has turned from mainly a stand-alone activity into everyday activities [13]. Digitized music and streaming services allow you to listen to music during free activities outside the home such as running [14]. Soundtracking involves choosing and listening to music to accompany various everyday practices such as commuting, working, hanging out and driving [7].

The development of streaming services like Spotify, Deezer and Apple Music has also meant that consumers can access large catalogues of music on the go [15]. The streaming model was first used in big-data processing of data broadcast in real time such as stock market data, weather forecasts, sports results, etc. [16]. Streaming services are different from these traditional products. The song that is broadcast via the service is not permanent, because access ends after the subscription expires [17]. Jean Baudrillard distinguish collection from the inferior activity of accumulating, noting that objects have two possibilities: they can be utilized or they can be possessed [18]. Streaming has eluded the boundary between music promotion and music consumption, producing "a new relation between exposure and sale, united within one and the same service" [19]. Playlists have become a central form of music consumption on streaming platforms. By signing in to Spotify, you will immediately be confronted with a playlist wall, tailored to your listening history, time of day, and other specific characters [20] [21].

Music streaming services afford people the ability to create and name their own playlists, or take pre-existing playlists crated by professionals play list editors and add, edit or remove tracks [22]. The reality is that dematerialization of music archives into streaming services shapes, but also is shaped by, the transnational drive for new markets by media companies like Spotify, Pandora, and Netflix to deliver catalogue content to bigger consumer markets [23]. In the mature post-disruptive supply chain, where the social peer-to-peer sharing aspect of Spotify are seemingly downplayed in favor of commercial playlist and customized playlist based on Spotify user data, the major's direct control of what music the consumer is exposed to actually increases compared to the pre-disruptive regime [24]. Music streaming services are technologically modern corporations that operate on one of the platform economy models. They use and develop software applications, but they cannot be classified in the software industry [25] [26]. Music streaming services, such as Spotify and Apple Music, have potential to disrupt the social dynamics of music consumption. For free or in exchange for a subscription fee, music streaming services facilitate anytime, anywhere access to vast catalogues of licensed music at little or no cost using an Internet-enabled device, such as a smartphone [27]. Music streaming services such as Spotify and Apple Music, have gone from a niche to the dominant mode of music distribution [28].

Spotify encourages its users to sign up with a Facebook profile to make it easier to connect with users with whom they share the same musical tastes [12] [26] [29]. By placing music numbers on existing servers and distributing them on the Internet, they use a form of cost model known as zero marginal cost [30] [31]. The zero marginal cost model, in its full expression, is applied to organizations that distribute a product from their own production as digital content. The zero marginal cost model could be applied to the Netflix platform, in the part where the products for which Netflix is the producer are distributed. Spotify uses a similar model although it pays rights to license holders to perform music numbers. We define Spotify as a digital service or platform that mediates the service between end providers and customers, something similar to Netflix or Hulu [6]. Streaming technology and combining content on-line and off-line models represent the third wave of digital disruption [32]. Sun refers to Pollack (2011) [33] and emphasizes how Spotify was acclaimed as "exactly what music fans had been waiting for, fulfilling the long-sought dream of a 'Celestial Jukebox' – a service that makes every song always available, freely and legally" [34]. Spotify itself has usually not been on the frontline of innovation, but followed trends set by other actors in the music, entertainment and technology industries [1].

III. KEY FINDINGS

In 2008, Spotify started with work, and in just six years of existence, i.e. in 2014, it has already exceeded the total revenue of one billion Euros. The third phase started in March 2014 following the removal of the AppFinder. In contrast to the previous phase, the boundary resource configuration now sought to consolidate the service scope across external devices while simultaneously facilitate the generation of external subscriber interfaces [6]. Aileen Lee was the first to use the term unicorn to denote promising high-tech start-ups. Investors popularly called them "working horses" because they promised high revenue growth and above-average profits for investors [35]. Subsequently, the name was given an expanded meaning and "unicorn" marked a start-up project that in a very short time generated revenue or capitalization of one billion dollars. Common to all the corporations that were given that name was that they were, in some way, connected to Silicon Valley, or that, like Spotify, they were created on the basis of the use of high technology. Spotify is not a lonely Swedish unicorn, there are several Swedish "unicorns" such as Skype, Klarna, Avito, Mojang, Apotea and Truecaller [23].

Table 1 Revenue and cost of streaming service Spotify (mill. Eur)

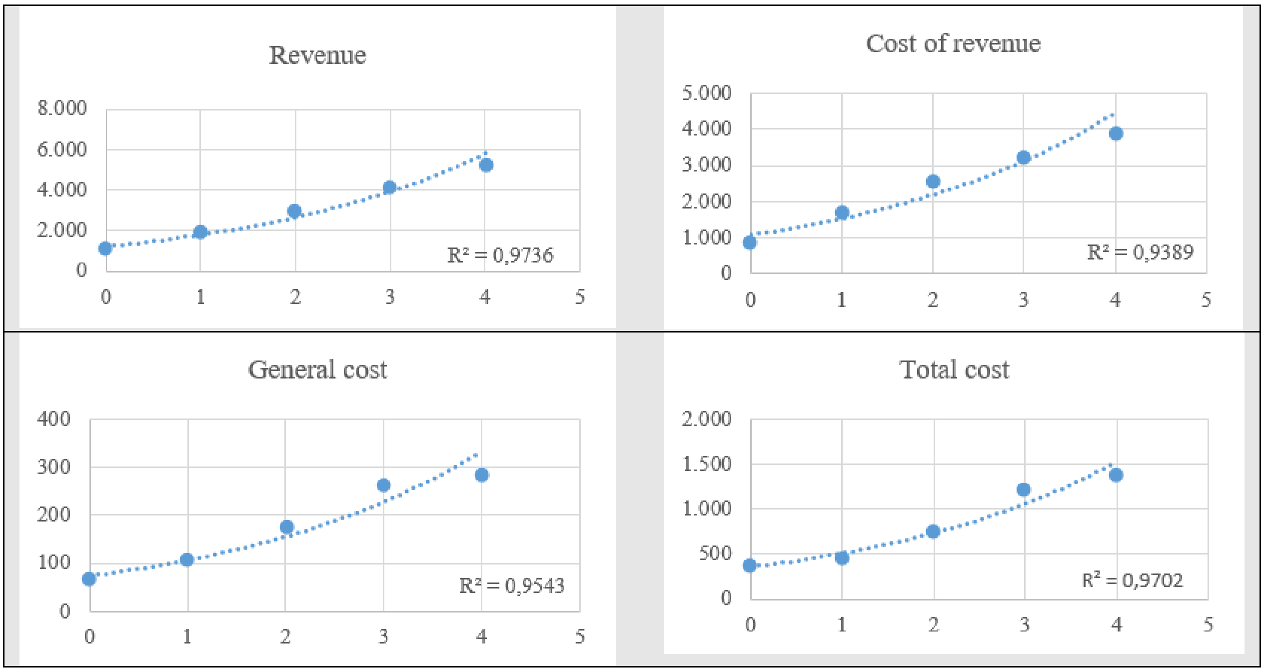
	2014.	*2015.*	*2016.*	*2017.*	*2018.*
Revenue	1.085	1.940	2.952	4.090	5.259
Cost of revenue	911	1.714	2.551	3.241	3.906
Gross profit	174	226	401	849	1.353
Research and development	114	136	207	396	493
Sales and marketing	184	219	368	567	620
General and administrative	67	106	175	264	283
Cost	365	461	750	1.227	1.396
Operative loss	**-191**	**-235**	**-349**	**-378**	**-43**

Source: own illustration

Table 1 provides an overview of the corporation's financial performance over the past five years. In the analyzed period, total revenue increased by almost four times or by 384.70%. Cost of revenue increased by 328.76%, which enabled the growth of gross profit by 677.59%. Direct operating expenses include all costs related to the acquisition and payment of copyright. The costs are paid according to the number of broadcasts, but also according to the average number of total published music content. There is constant controversy about how to pay for copyright and who owns the copyright if the music number is broadcast on a streaming service. Gross profit margin increased from 16.04% in 2014, to 25.73% in 2018.

Other operating costs in the analysis include general operating costs and finally, as the sum of all costs, total operating costs. General operating costs include the costs of managing and maintaining the music platform, i.e. all those costs that maintain the system, and are not directly related to the core business. Most of these costs include the salaries of management and employees of the corporation. In the analyzed period, general expenses increased by 422.30%, which was less than the growth of direct costs and less than the growth of total revenues. General expenses accounted for 6.18% of total revenue in 2014, before falling to 5.38% of total revenue in the last analyzed period. One of the factors in the successful operation of a corporation is reflected in the growth of total costs. Total costs, except for direct operating costs, increased by 382.70% in the analyzed period, which is far below the total revenue increase of 484.70%. Total operating expenses amounted to 33.64% of total revenue in the first analyzed period, to fall to a higher 26.64% in 2018.

The coefficients of determination of the four analyzed items from the Spotify account and profit are shown in Figure 1. All four coefficients are greater than 95% of the interpretation, and the total revenue coefficient has the highest interpretation coefficient and is 97.36%. Table 2 shows the exponential trend equations for the four analyzed items. The results of the research show an average increase in the total income of the corporation in the analyzed period of 47.74%. The average revenue growth, in the last five years, is five percentage points higher than the increase in



Picture 1 Coefficient of determination (Spotify)
Source: own ilustration

Table 2 Exponential trend equation

Revenue	Cost of revene	General cost	Total cost
$Y = 1219*1{,}4774^x$	$Y=1077{,}2*1{,}4260^x$	$Y=73{,}117*1{,}4614^x$	$Y=353{,}91*1{,}4422^x$

Source: own ilustration

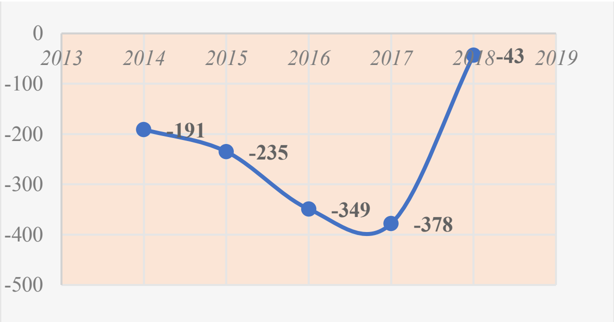
direct operating expenses. Direct operating expenses increased on average by 42.60% and account for the largest cost in total costs and are the most important indicator of the movement of the corporation's total operations. The average increase in general operating expenses was 46.14%, which is one percentage point less than the average increase in total revenues, but the general cost is a relatively small item compared to other types of costs and does not significantly affect the overall operating result.

The financial result is directly related to the number of service users. Spotify generates most of its revenue from the subscription relationship. In relative terms, subscriptions make up about 90% of revenue, while advertising revenue is only about 10%. In the last quarter analyzed, Spotify had 248 million users who visited using the app. As a monthly user, every visit of an unregistered visitor who views or listens to some content on the application in the time recorded in milliseconds is recorded. Users who pay a subscription and have personal accounts opened on the app are called premium users. The number of such users increased in the analyzed period of five years from 28 million to 113 million. Data on the increase in the number of users are shown in Table 3.

Table 3 Premium and monthly Spotify users (mill.)

Period	**Premium users**	**Mounthly users**
Q3 2015	28	82
Q3 2016	36	113
Q3 2017	62	149
Q3 2018	87	191
Q3 2019	113	248
	$Y=27{,}459*1{,}4438^x$	$Y=84{,}191*1{,}3150^x$
	$R^2=0{,}9842$	R2=0,9975

Source: own illustration



Picture 2 Gain/loss before tax (mill. Eur)

Source: own illustration

The reasons for the successful operation of the corporation and the increase in revenue of 384.70% in the last five years can be directly related to the increase in the number of premium customers. The number of premium users, i.e. users who pay some form of subscription, increased at an average rate of 44.38% per year. At the same time, the number of users who came to the app at least once a month without buying a subscription was increasing at an average rate of 31.50% per year. The average growth rate of regular users was higher than the growth rate of occasional users, which ensured revenue growth and stability of the platform. In cyberspace, people collect lists rather than objects, and those lists serve as a form of personal expression that derives from but also supersedes the record collection [36]. In comparing music-streaming practices with earlier ideals for music collection one immediately encounters the dilemma that digital formats and streaming services make it impossible to "collect" music as such because the format offers music thorough subscription rather than ownership [18].

Indicators of financial result and balance of income / expenditure before interest and taxes, recorded a negative trend from 2014 to 2017. Losses realized after the payment of direct and general expenses increased from 191 million Euros to 378 million Euros. In the last analyzed period, losses were reduced by 88%, and the total loss was $ 43 million. An increase in the number of subscribers of 44.38% and an increase in revenue at a rate of 47.74% indicate the end of the negative trend in the financial result. The growth phase, or star phase as it is called, is slowly coming to an end and the corporation is approaching a mature phase. However, Spotify should be careful with estimates of future financial results. Fleischer (2020) warns of the fundamental precarity of technological starts-up, including Spotify. The precarity results from their dependency on venture capitalist willing to cover the losses, as these start-up (with few expectations) are not profitable. In order to attract the capital, they need to sustain what is commonly known as hype or buzz [1] In a study of digital media, a relevant approach might therefore be to „follow the hype" [37].

IV. Conclusion

The music industry has changed its revenue model. Music streaming platforms generate most of the revenue of the music industry. Brick and mortar stores of physical sound carriers are very rare and serve only a few more vinyl collectors.

Future research in the music industry will focus on two fundamental directions. On the one hand, research will seek to determine the structure and level of revenue by categories of the music industry, and on the other hand, research will be focused on researching individual ecosystems of music streaming platforms. Long-term research in the field of music industry will focus on the analysis of revenues of global music corporations that will generate an increasing share of revenues from copyright and synchronization. As a special musical niche, the sale of vinyl and all forms of income associated with that niche will appear.

Spotify has grown into the largest global music streaming platform. It generates revenues of more than 5 billion euros and has more than 100 million premium users. In 2018, operating losses were EUR 43 million and decreased sharply compared to last year. The increase in revenue and number of customers gives hope that it will stabilize its business and become a profitable corporation.

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