

THE RELATION BETWEEN CZECH RECORDED AND LIVE MUSIC INDUSTRY

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Abstract

The music industry has been facing significant changes in recent years. The recording industry has been strongly influenced by digital technologies, file sharing, online piracy and unbundling, whereas the live music industry has been influenced by the ever-increasing number of substitutes in the form of various leisure activities. Demand for music recordings and live performances and its elasticity is affected by several socioeconomic, demographic and technological factors, while the two sectors of the wider music industry are still closely related and interacting. However, the positions of the key players are changing. Demand for recorded music would traditionally stimulate demand for live music and vice versa, leading to an increasing demand spiral. Still, in recent years the music industry has been transforming rapidly. There is no expert study on the development of the recording and concert industry in the Czech Republic and on the relationship between those two closely related industries.

The aim of this paper is to find the relationship between the recording industry and the live music industry on examining the development of the revenues from music recordings sales and concert ticket sales in the Czech Republic, defining the cross elasticity of demand for recorded music and live music. The article works with datasets from the International Federation of Phonographic Industry, Czech author rights organizations (OSA and Intergram), CEEMID (Central and Eastern European Music Industry Databases) and a dataset from a survey conducted with music professionals and fans for SoundCzech (Czech Music Office).

Key words: record industry, live music industry, cross elasticity of demand

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Introduction

The music industry is based on the creation, sale and consumption of music content, in two basic forms: music recordings and live performances, thus divided into the recording industry and the live music industry. The third component of the music industry can be considered publishing. The individual areas of the music industry have always been closely linked, and all actors in the music industry are mostly active in both the music recording market and live performance. The relationship between the recording and concert industries has evolved and changed over the last century, the situation where the music industry was based on the record market and live performances acted more as a support element for record sales has changed due to globalization and digitization, and in addition to the transformation of the recording industry itself, the importance of the concert industry has grown significantly. Williamson and Cloonan recommend the use of the term "music industries" instead of the singular form and point to the diversity of individual areas of the music industry, their specifics and the need to assess each segment individually. (Williamson & Cloonan, 2007)

1 Aspects influencing the creation and consumption of music, the development of the music industry

One of the main economic aspects that affects the actors of the music industry in terms of music content creation and production, as well as other performances, is the impossibility of applying technological progress in a stagnant sector, a phenomenon known as Baumol's cost disease.

1.1 Baumol's cost disease

Assuming the same rate of real wage growth in a stagnant sector as in a progressive sector, without the possibility of applying technological progress, there must naturally be a constant increase in costs in a stagnant sector. (W. J. Baumol & Bowen, 1966)

It could be argued that, to some extent, technological progress can also be applied by performing arts organizations, but as a result it will never bring such a cost reduction as in the progressive sector under consideration, and the impact on productivity itself will only be negligible, as the basic element in the field of performative art is human work. (Towse, 2003)

There are also opinions that Baumol's cost disease was one of the factors that gave rise to new music genres and, as a result (through blues, rock and roll and related styles) of all pop music. (DeBoer, 1985)

1.1.1 Product degradation

One way to deal with the cost disease is the so-called product degradation, in the field of performing arts, for example, reducing the number of rehearsals, usually at the expense of

production quality, disproportionate increase in spectator capacity at the expense of visitor comfort and other cuts within certain artistic and economic barriers. However, according to Baumol, this way of reducing costs was only a manifestation of the so-called suppressed form of cost disease, when slower rising costs of cultural institutions created the impression of curing cost disease, which did not actually happen.

1.1.2 Economies of scale

The second way to deal with the disease is economies of scale. This applies especially to organizations with a higher number of permanent employees receiving a fixed salary, whereas administrative and overhead costs of running the organization are also fixed. In the area of the recording industry, economies of scale were realized mainly by large recording companies (so-called major labels), which controlled most of the world market for music recordings. With access to many distribution channels and media presentations, these dominant music publishers were able to reach significantly more customers, with the same recording costs as indie labels, while distribution and promotion costs were almost negligible due to existing distribution and promotion networks. (MacNeill, 2009)

1.1.3 Increasing product prices

Another way to deal with Baumol's cost-disease is to increase product prices (in the case of the music industry, ie ticket prices or the price of recordings or music media). However, this is only possible until demand is saturated, or until the consumer begins to react negatively to price increases. There is no common view of the price elasticity of demand for art, but most of the time it is believed that demand for cultural products is inelastic, ie that a percentage change in price causes a smaller percentage change in the quantity of product demanded. (Seaman, 2006)

1.2 Bowie theory

Alan Krueger (2005) mentions one of his hypotheses as the so-called Bowie theory (it was named after the British singer David Bowie, who predicted that "music itself will one day be like water or electricity", ie that it will be available everywhere and the only original and unique only live performances will remain a musical experience). According to him, the reason for the increase in prices for concerts is a decrease in the income of artists from recordings and royalties, a complementary product to concerts. His hypothesis is that in the past, when high attendance at concerts led to a large number of record sales, artists often kept ticket prices lower than those that would maximize profits from the concert itself. New technologies that have allowed consumers to get their music without buying the recording itself weaken the relationship between recordings and concerts in terms of the product. As a result, concerts, or

concert tickets, are valued more as the products of a single, monopoly industry. However, he notes that concerts also have other complementary products, such as merchandise. In addition, many artists make sure that they do not spoil their reputation by calling it greedy, so that ticket prices tend not to reach the level of this monopoly. (Krueger, 2005)

1.3 Demand price elasticity

According to many studies, the price elasticity of demand for performing arts varies with respect to various socio-economic factors. Different price elasticity can be observed for different social groups, specifically differences in the degree of elasticity of high- and middle-income groups. Demand from higher-income viewers is generally less elastic than demand from the middle-income segment. (Ginsburgh & Throsby, 2006)

Other studies focused on the price elasticity of demand according to the relationship of visitors to the cultural institution, from the research of Marianne Felton (1994/1995), which focused on attendance and price elasticity of demand for American orchestra production and in which Felton divides audiences into the „total attendance group“ and the „subscriber group“, it follows that the price elasticity of subscribers' demand is significantly lower (0.82) than the price elasticity of ordinary visitors' demand (1.4). Thus, the average visitor reacts significantly more significantly to price changes. (Ginsburgh & Throsby, 2006)

As for the price elasticity of demand in the recording industry, the advent of digital technologies, data sharing and the associated boom in internet piracy have had the greatest impact. While before 2000 the price elasticity of demand for music recordings was inelastic (0.64), between 2000 and 2005 it became significantly more elastic (1.4). Downloading music here acted as a substitute for physical media, the only price of which was a very low risk of detection and associated fines. (Stevens & Sessions, 2005)

It was the advent of digital technology, piracy, streaming and unbundling that were the main factors in changing the face of the music industry throughout the Western world.

1.4 Cross-elasticity of demand

The two branches of the music industry are largely dependent on each other. Live performance can function as a substitute, but also as a complement to listening to a recording, taking into account the perception and preferences of their consumer. It is common for a listener to be interested in attending a concert by a performer after listening to a recording, just as a concert goer often leaves with a purchased music medium. In this case, they are complements. For some people, however, it is enough to consume only one form of music content with one artist, or

they do not have enough free time for both, and decide between attending a concert and buying a recording. However, the second variant is less common. Papies and van Heerde (2017) address the cross-elasticity of demand for music recordings and live performances in a recently published study. In their research, they analyze revenues from the sale of recordings and live performances by 400 German performers over 6 years. Among other things, research shows that the effect of increasing the demand for a single artist's recording on increasing the demand for his live performances is significantly higher than the effect of increasing the demand for live performances on increasing the demand for a given artist's recordings. (Papies & van Heerde, 2017)

1.5 Digital technologies, piracy, streaming, unbundling

1.5.1 Piracy and downloading

Research on the topic of piracy impact on music industry has varied, but over time, empirical studies have shown that piracy and illegal downloading have indeed damaged and continue to damage sales of music media. Although most of this research has only been conducted in the United States, the results are expected to be valid in other markets, thanks in part to the globalization of the music industry and the Internet as the main tool for distributing illegal copies. (Towse, 2003)

An interesting study of piracy that partially supports Bowie's theory of concert ticket prices is the study by Felix Oberholzer and Koleman Strumpf (2004). According to them, jazz fans are less inclined to download music and piracy than rock and pop fans. While the average entrance fee for jazz concerts increased by 20 % between 1996-2003, the average entrance fee for a rock and pop music concert increased by 99 %. It is thus possible to consider a possible link between the sale of media, the illegal download of music recordings and the amount of admission to concerts. (Krueger, 2005)

The same authors then claim that piracy has no effect on CD sales, as it allows people to learn about artists through sharing and can increase sales. According to them, piracy does not have a significant impact on CD sales. This is in contrast to the studies of Stan Liebowitz (2016), who, on the other hand, shows that file sharing and illegal downloads have an almost exclusive effect on the decline in revenues from music sales. Other authors then examine the relationship between piracy and concert attendance. They find that while sales of music recordings have fallen since the rise of piracy, the number of concert attendees is rising sharply. While sales of CD artists declined, the profitability of live performances grew. (Ginsburgh & Throsby, 2014)

Some research also shows that those who download illegally also spend more money on music (legally) than individuals who do not otherwise participate in music piracy. (Watson et al., 2015)

1.5.2 Streaming

Streaming services have become a major distribution model for the music industry in recent years. Streaming services have emerged as a faster and more accessible alternative to downloading both unlicensed and licensed music, as they do not require the download and storage process itself. In their 2015 study for the JRC's Joint Research Center, L. Aguiar and J. Waldfogel examine the effect of Spotify on online music sales. It concludes that Spotify replaces the purchase of online recordings, with 137 listings replacing one paid download of a song. Interactive streaming is profitable neutral for the music industry. The generation of profits at Spotify works mainly thanks to the interconnection between songs and artists, whose common mix is then offered to the user. (Aguiar & Waldfogel, 2018)

In their study, Naveed, Watanabe and Neittaanmäki (2017) then found and defined the relationship between the growing popularity of streaming music and the renewed interest in live music. The digitization of music and the parallel development of streaming and live music is a very important step in sustaining the music industry. The mutual implementation of new sales strategies and technologies between the two markets (digital recording industry and concert industry) is perceived as a positive element. (Naveed et al., 2017)

A study by Nguyen, Dejean and Moreau (2014) shows that free music streaming (where the consumer does not possess the music but only has access to it has no significant effect on CD sales and affects positively live music attendance, but only for national or international artists who are more likely to be available on streaming services. (Watson et al., 2015)

1.5.3 Unbundling

Unbundling means that consumers do not tend to buy an entire album, which is only available as a bundle of songs if they are only interested in a few songs or one on their own. In terms of the demand for recordings, this may mean an increase, as consumers who would not buy the entire album will reach them. However, Anita Elbers' research shows that the ability to buy individual songs instead of an entire album reduces overall demand for and revenue from recordings. (Elberse, 2010)

The impact of piracy and unbundling is being investigated by D. Papiés and Harald J. van Heerde (2017). In their work, they find that unbundling, which generally receives less attention

than piracy, has the same impact on weakening the relationship between the demand for live performances and the demand for music recordings. (Papies & van Heerde, 2017)

2 Trends in Czech music industry

The research follows on from some of the above-mentioned research, while trying to compare the findings with the Czech music industry. The research consists of two parts. The first maps the development of the music recording market and live performances in the Czech Republic over the last 10 years based on the collection of secondary data from collective copyright administrators (OSA, Intergram), representatives of the Czech recording industry (IFPI CZ) and other domestic music professionals.

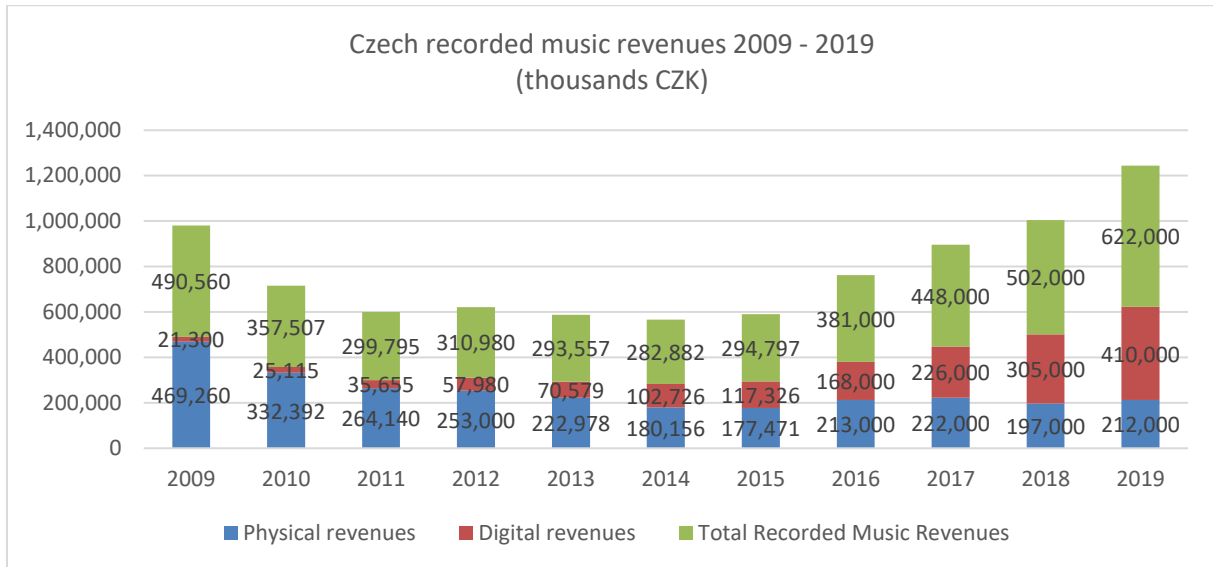
The second part of the research was focused on consumers and examines selected aspects of the consumption of music content in the Czech Republic. The collected data are then analyzed by descriptive methods and correlation analysis.

2.1 Development of the recording industry in the Czech Republic in comparison with the world trend

The data set consists of data from financial statements, annual reports and other reports Czech collective management of author rights, for research data was further processed and validated in cooperation with representatives of the collective copyright managers, promoters and other music professionals, for the research purposes qualified calculations of individual categories have been carried out.

The development of the Czech recording industry more or less follows the global trend. The initial growth in sales of music media in the 1990s was replaced by a gradual decline at the turn of the millennium. An important milestone was, as elsewhere in the world, the launch of digital sales, and later streaming services.

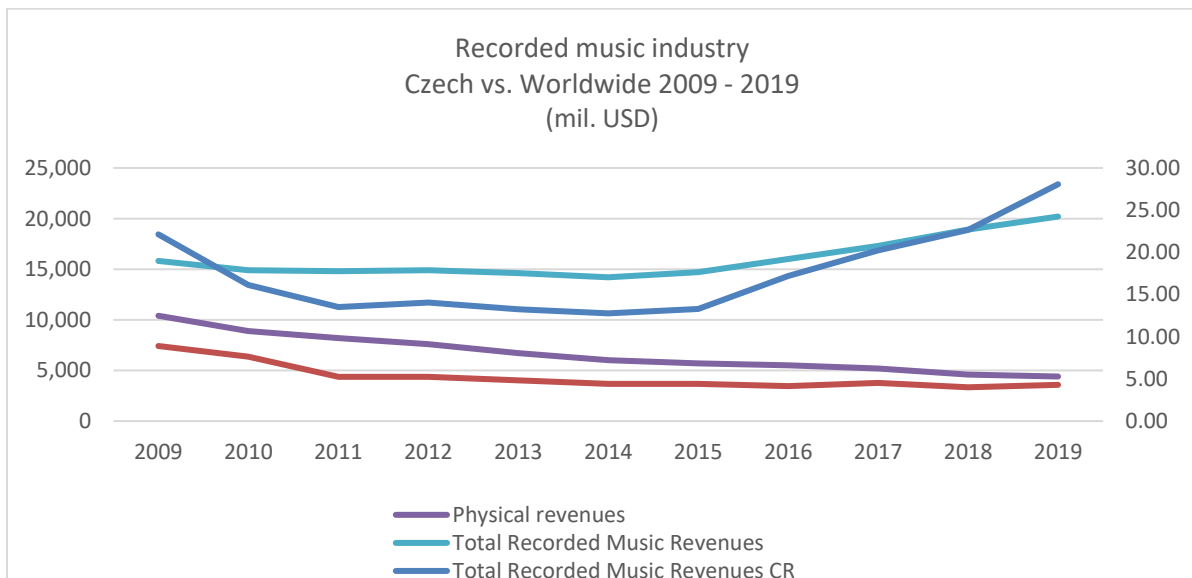
Fig. 1: Czech recorded music revenues 2009 - 2019



Source: Own making, IFPI (2020)

The following chart shows a comparison of Czech and international recording industry. The data are given in millions of US dollars, so the auxiliary y-axis (right) is used to represent the Czech market. An interesting fact is that the values for the Czech market are approximately one thousand times lower than in the world. The lower red curve then shows the development of sales of physical media in the Czech Republic limited only to Czech performers in comparison with world sales of physical media (violet curve).

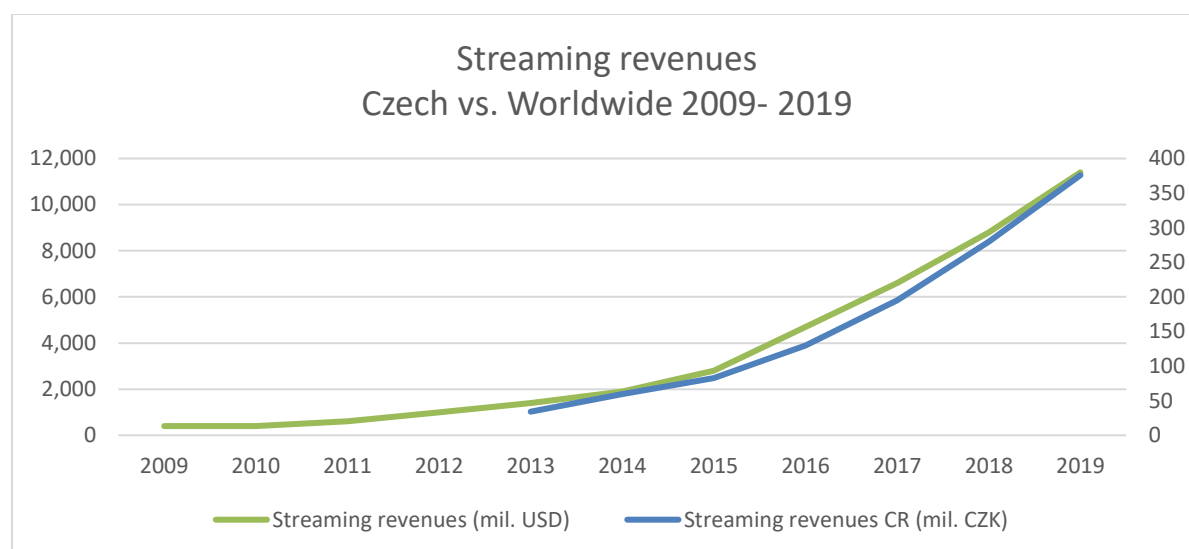
Fig. 2: Recorded music industry Czech vs. Worldwide 2009 - 2019



Source: Own making, IFPI (2020)

The more pronounced decline in the total revenues of the Czech recording industry caused by the decline in sales of physical recordings is obvious. While the global recording industry tended to stagnate between 2009 and 2014, the Czech market experienced a sharper decline, which can be attributed to a slower growth in digital sales. These began to grow significantly with increasing streaming revenues from 2015.

Fig. 3 Streaming revenues Czech vs. Worldwide 2009 – 2019



Source: Own making, IFPI (2020)

Thus, a significant relationship can be observed between the development of total revenues of the Czech recording industry and the global trend (correlation coefficient 0.99).

Tab. 1: Title of table (Times New Roman, 12 pt. bold)

Year	Share of streaming on digital revenues	Share of streaming on total revenues	Share of streaming on digital revenues	Share of streaming on total revenues
	CR	CR	WORLDWIDE	WORLDWIDE
2013	48 %	12 %	25 %	10 %
2014	58 %	21 %	31 %	13 %
2015	70 %	28 %	42 %	19 %
2016	77 %	34 %	59 %	29 %
2017	86 %	44 %	70 %	38 %
2018	92 %	56 %	80 %	47 %
2019	92 %	60 %	88 %	56 %

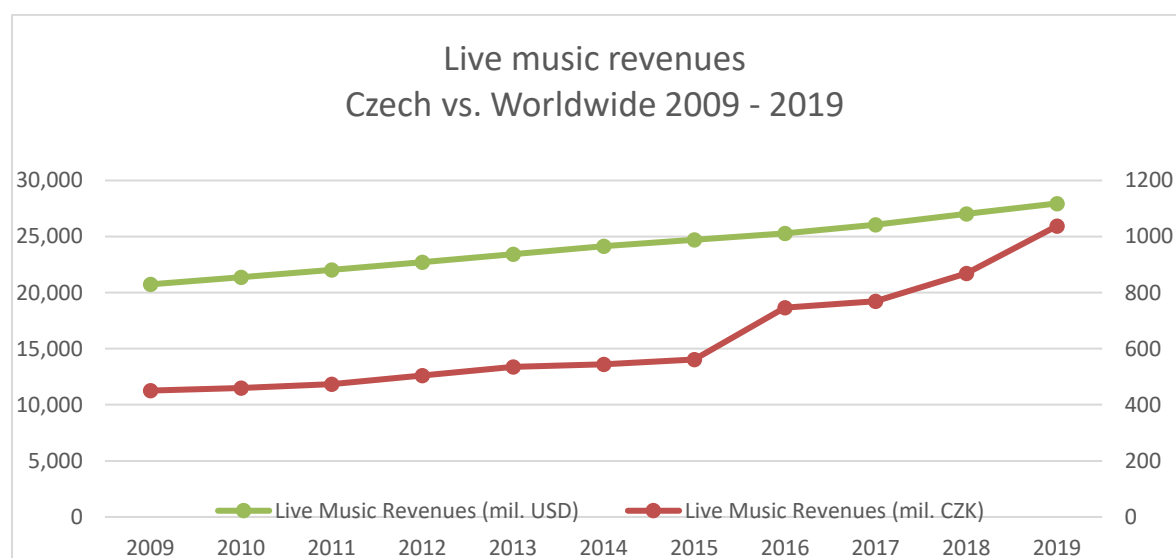
Source: Own making, IFPI (2020)

The development of streaming revenue shares in the Czech Republic is also closely correlated to the worldwide trend.

2.2 Development of the live music industry in the Czech Republic in comparison with the world trend

In the case of the development of the revenues of the concert industry, the Czech market also follows the global trend; a more significant jump can be recorded between 2015 and 2016.

Fig. 4 Live music revenues Czech vs. Worldwide 2009 - 2019



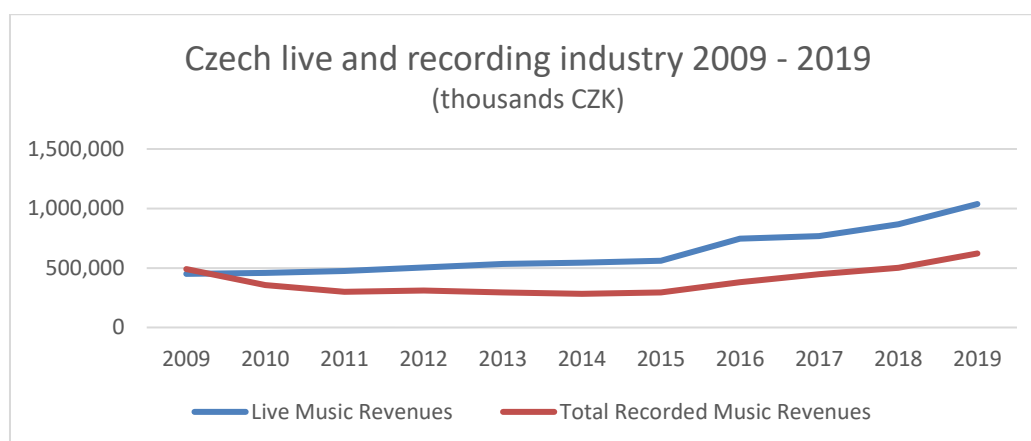
Source: Own making, OSA (2020), Statista (2020)

The correlation between the development of income in the Czech concert industry is also significant and the coefficient is 0.97.

2.3 The relationship between the Czech live and recording industry

As seen in Figure 6, there was a significant difference between the development of the record industry and live music industry revenues between the years 2009 and 2015, while the record industry total revenues kept declining, the live music industry was growing. The curves started aligning in 2015, both industries are growing thenceforward.

Fig. 5 Czech live and recording industry 2009 - 2019



Source: Own making, OSA (2020), Statista (2020)

3 Czech music consumer behaviour

The aim of this part of the research was to define the basic aspects of consumer behavior of a Czech music fan, to determine the factors influencing his decision-making and to characterize the basic habits of consuming music content in the form of music recordings or live performances. For the needs of the research, a questionnaire survey was prepared with a sample of 278 respondents selected on the basis of intentional selection (respondents who had a high probability of at least occasional attendance of music events and of purchasing music records), of which were 56 % women and 44 % men. Although the real representation of gender in Czech population is different and corresponds to a ratio of approximately 50:50, for the purposes of this research, the gender variable was not the main observed variable, and thus the weighting of the variables was not used in the analysis. The highest representation is in the categories 15-21, 22-24 and 22-29 years, these three groups of respondents represent approximately 80% of the sample. Descriptive statistics methods and correlation analysis were used (Pearson's and Spearman's correlation coefficient). The collected data were compared to the Music Listening Report IFPI in 2019 who carried out a global research in April-May 2019.

3.1 Recorded music consumption

80 % of respondents said that they most often listen to recordings through streaming services compared to 89 % globally according to IFPI's Music Listening Report (2019). This was followed by legally obtained recordings (9.2 %) and illegally obtained recordings (4.6 %). The most used streaming services were Spotify and YouTube.

The most frequently used devices for listening to music were smartphones with 56.9 % (compared with 27 % globally) and computers / laptops with 28.5 % (compared with 19 % globally).

The respondents divide into two groups of consumers who consume recordings either from physical media or digitally (downloaded songs). However, both groups have a significant share of consumers who prefer to use streaming.

About 71 % of respondents do not buy physical records at all, (following the global trend, according to IFPI report, only about 21 % of consumers buy physical records) , from those who do only 29 % spend more than CZK 200 per month for physical recordings.

The last item that is not related to recordings, but is important in terms of consumer spending on music, is merchandise. 20.8 % of respondents do not buy these non-musical objects of artists at all. Respondents buy merchandise the most at concerts (63.1 %). On average, consumers spend CZK 230 per merchandise for a concert attended. The median is CZK 200.

3.2 Live music consumption

A total of 75.4 % of respondents regularly attend concerts, 81.8 % of men and 68.8 % of interviewed women attend live performances. Given their almost even representation, it would be useful to find out whether it is generally the case that more men than women go to concerts.

Based on the analysis of the answers of individual respondents, it can be stated that a typical live music consumer is aged 22-29, visits live concerts regularly 2-3 times a month, and most often at the place of residence, however, most of the respondents are willing to travel throughout the Czech Republic for selected events, 45.4 % of respondents are willing to travel to concerts in the EU and 6.9 % even worldwide.

44.6 % of consumers surveyed think that the prices for live performances are appropriate 30 % of respondents said that they felt "rather lower" and 16.2 % of respondents answered that prices are „definitely lower“ than they should be. That could be a sign for the artists and promoters that they haven't reach the price ceiling yet and the tickets price can be further raised.

The most frequently mentioned reason for attending the concert (on a scale from 1 to 10) was the music itself or the performer (mode 10, median 9), spending time with friends (mode 8, median 8) and relaxing (mode 8, median 7). A more significant dependence can be seen among the variables where it can be logically expected, for example, the correlation between attending

concerts from an early age and being active in music. It is also obvious that for consumers who attend concerts from their childhood are more usually regular visitors in their adulthood.

The most important reason not to attend live concerts was the lack of free time, participation in other leisure activities and insufficient funds (logically mostly by the low income groups).

Based on correlation analysis created between almost all monitored variables, these are some of the most significant correlations found:

- The average monthly attendance of concerts is higher for people with a higher monthly income.
- The average monthly attendance of concerts is higher for people who attend concerts from an early age.
- For people with a lower monthly income, the ticket price is a more significant reason not to attend the concert.
- People from smaller municipalities spend more of their budget on transport to concerts.

3.3 The relationship between the live and recorded music consumption

Concerning the price demand elasticity of the respondents, there is a significant disparity between the price elasticity for the recorded music and live music. The demand of the respondents for recorded music is about 13 % more elastic than the demand for live music. It corresponds to the amount of respondents who think the concert tickets prices could be higher.

The demand for live music of the subscribers group (people attending concerts more often) is less elastic than in case of ordinary visitors (confirming the study of Felton). On the other hand, there has not been found any correlation between the average spending on concert tickets and the price demand elasticity for neither recorded music nor live music.

As for the cross-format elasticity, the respondents were by almost 50 % more likely to increase the demand for live music after the increase of recorded music price than to increase the demand for recorded music after the increase of concert tickets price.

The demand for production of both branches is also influenced by the existence of other substitutes, ie other leisure activities of a cultural and non-cultural nature.

Conclusion

The development of the Czech music industry more or less follows the global trend, there were only few deviations in specific years. After the several-year decline, the wider music industry revenues started to grow again thanks to the boom of streaming services usage accompanied by constantly growing live music industry revenues.

What remains specific for the Czech music industry is the ongoing high rate of consumers buying physical records compared to the global average (which correlates with domestic artists physical records sales).

This paper only focused on some basic aspects of consumer behaviour in the field of Czech music industry and needs to be followed by a deeper and more complex research of the industry structure involving not only consumers, but also artists and music professionals (promoters, agents, venues etc.).

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