The Influence of the Music Genre on the Emotional Consumer Response and Intentions to Purchase Online

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Abstract

Purpose of the article: How online shop atmosphere (different background music genre) affects emotional states depending on different product categories; and how the emotional states induced by website atmosphere affect satisfaction with background music, e-shop quality perception and purchase intention responses.
Methodology/methods: Experiment, mixed ANOVA and linear regression.
Scientific aim: The current study confirmed the stimulus-organism-response relationship by using online stimuli affected the emotion and attitude towards the site (emotional/cognitive states) and consequently influenced purchase intent (response).
Findings: The results indicated that the manipulation of different music genres makes it possible to assess whether there are differences between the music genre impact on the emotional response. The impact of different product categories on the emotional response was identified. The analysis results showed that emotional response was positively associated with the intention to buy when popular music was playing as the background of the e-shop; furthermore, the positive impact was identified when the quality factor was operating.
Conclusions: It is concluded that the emotional response is positively associated with the intention to buy when popular music is playing, further-more, the positive impact is identified when the quality factor is operating. When no music is playing, the emotional response has a negative impact on the intention to buy. The study limitation can be perceived in the fact that the same respondent evaluated only one of the online stores – it is useful to compare the same respondent's emotional response and intention to buy both utilitarian and hedonistic products in e-shops.

Keywords: music genre, emotional response, purchase intention, online shopping, website quality perception

JEL Classification: M15, M21

Introduction

Online retailing has been identified new forms and decisions how to attract the online customer and give more satisfaction with online shopping. It encourages businesses to pay priority attention to the emotional connection with the consumer, and one of the ways to achieve this aim, *i.e.* the creation of an emotionally attractive environment (Petermans *et al.*, 2009). For this reason, the environmental factors such as lighting, music, staff appearance, *etc.* and their management are becoming an important business interest.

E-tailing is a rapidly spreading way of selling goods and services, which has a number of advantages compared to the traditional ways of selling, making it attractive to both businesses and consumers. While businesses focus on e-tailing, the importance of atmospheric factors is declared not only in the context of physical stores, but also online services. Katawetawaraks, Wang (2011) point out that such atmospheric factors as background music are becoming very important in the electronic environment in addition to the general Internet site quality characteristics evaluation. Online retailing leads to the need to investigate how manipulation of different atmospheric factors, for example the background music genre, tempo or playing method, can influence consumer satisfaction (Walsh *et al.*, 2011), importance of the final decision (So, 2015), or how emotions affect the consumer's loyalty (Yu, Dean, 2001). Moreover, they should be investigated in terms of total products or services evaluation (Kim, Gupta, 2012); in the e-tailing context, they are mostly attributable to the influence of the intention to buy (Ding, Lin, 2012).

Music, as an environmental factor, is associated with emotion studies, highlighting the potential of the latter on consumer behaviour and the potential development possibilities of this topic. The influence of music on the consumer behaviour is associated with the statement that music, as an environmental factor, is a powerful emotional stimulus, an efficient and effective tool for shaping the user experience in the retail trade (Petruzzelis *et al.*, 2014). Emphasizing music and other environmental factors connection, a noteworthy fact is that a holistic assessment evaluating the potential impact of music on a consumer is crucial: this means that in addition to music, the consumer is influenced by other environmental factors (Morin *et al.*, 2007; Demoulin, 2011). This is acknowledged by Harris, Ezeh (2008) claiming that the scientists identify deficiencies in concentration on one element of the environment as a major issue in the research. The purpose of this study is two-fold, examining the following:

(1) How online shop atmosphere (different background music genre) affects emotional states depending on different product categories,

(2) How the emotional states induced by the website atmosphere affect satisfaction with background music, e-shop quality perception and purchase intention responses.

1. Conceptual background

Atmosphere research falls generally into environmental psychology (Mehrabian, Russell, 1974). As such, atmosphere models generally make stimulus–organism–response (S–O–R) type predictions. The store invokes specific cognitive and affective reactions and these reactions modify shopping behaviour (Bitner, 1992). Likewise, the framework is consistent with the consumption–emotion–value paradigm in that it emphasizes the important, intervening role played by affective reactions.

1.1 Shopping atmosphere features

The shopping environment concept acquires a different meaning depending on what interest groups context it is analysed in. Taken from the perspective of shops' representa-

tives, the shopping environment is used to create an atmosphere that would increase the possibility of a consumer to buy (Kotler, 1973). Arnould *et al.* (1998) define it as deliberately projected places, designed for the implementation of commercial actions. It is becoming clear that the environment is a multifaceted concept, which leads to the need to divide environmental factors into groups. This must be confirmed by D'Astous (2000), arguing that it is impossible to identify all environmental factors and it becomes the main reason why they are classified.

In the early studies on this topic, Kotler (1973) found that the environment is perceived through the senses, and the main sensory channels through which the individual perceives the environment are: sight, sound, smell and touch (the sense of taste, according to the scientists, does not directly help to perceive the environment). The author specifies these individual senses: visual (colour, brightness, size, and shape); sound (sound intensity and frequency); olfactory (smell and freshness); tactile/tangible (tenderness and temperature).

Bitner (1992) classifies the environmental factors into the tangible (*e.g.* decorations of the building) and intangible (such as temperature, colour, or odour) factors, with the exclusion of social factors category. Bitner (1992) introduces the concept of the servicescape – it is a man-made physical environment, in contrast to the natural or social environment, and has identified its components: environmental factors (temperature, music, smell, *etc.*), spatial elements (layout, equipment, furniture, *etc.*) and marks, symbols (decor items, marking, *etc.*).

1.2 E-tailing atmosphere features

In the business digitization process – when physical stores are replaced by the electronic ones – such definitions as "e-atmosphere" or "e-environment" are increasingly being used in the scientific literature. When specifying this concept, it should be noted that the latter includes many of the same environmental factors (such as colour, layout, *etc.*) as the analysed atmosphere concept, but differs in that e-atmosphere exists in virtual space (Koh, Kim, 2007). Eroglu *et al.* (2003), with the reference to other authors (Bitner, 1992), emphasize that the virtual environment does not include such physical environment sensory dimensions as temperature, smell and material, but includes other elements not characteristic to the physical environment (flexibility in time and space). Koh, Kim (2007) compare the types of shops – online shoppers are likely to choose another e-shop as soon as they come across the first unacceptable environmental stimulus, while in a physical shop, any unacceptable physical environmental stimulus impact could be compensated by interaction, communication with the service personnel.

Hsu, Tsou (2011) consider e-shop quality (quality of information, quality of systems, quality of service) to be e-atmospheric stimulus and investigate its impact on the consumer's emotional response and intention to buy. The authors such as Kim, Lennon (2013) focus on e-shop reputation and quality factors impact on the consumer's emotional response and intentions. It should be noted that both scientific works are based on the SOR model structure and, as noted by other authors, research results validate the suitability of this model.

1.3 Music as a shopping atmosphere feature

Music, as an environmental element, has become the subject of interest for many specialists of different fields of science. According to Mattila, Wirtz (2001), in the broad sense, music can influence consumer behaviour; the influence of music is emphasized in terms of its impact on the physiological reactions – breathing, heart rate, *etc.* (Gomez, Danuser, 2007). The music effect depends on various factors, such as its location, situation how it is being listened to, the characteristics of

the listener, *etc*. The uniqueness of music in the context of shops, electronic stores or any other places that provide services consists in the fact that it is considered to be the background. It should be noted that unlike advertising, the latter rarely becomes the main focus. The background music is defined as less dominant and sometimes barely noticeable (Lantos, Craton, 2012). The music is most of all played as background music in a continuous way in the traditional retail environment. More than less, the music is played as a background in different product category e-stores. According to the scientific literature, it was identified that the response to the environmental stimulus may depend on the buying situation – the reaction can result in what products – utilitarian or hedonistic – are purchased (Ding, Lin, 2012). Accordingly, the following hypothesis was developed:

H1: The visitor's emotional response during online shopping will be higher when the background music plays compared to the absence of music.

H1a: The visitor's pleasure during online shopping will be higher when the background music plays compared to the absence of music.

H1b: The visitor's arousal during online shopping will be higher when the background music plays compared to the absence of music.

The music could be played in different ways, using different music genres, tempo and *etc*. A various playing music method may cause different attention and evoke different browsers' response.

In this context, it is important to emphasize the multidimensionality of music – it is subdivided in accordance with the objective structural time (tempo, rhythm), strength (sound) and structure (dynamics) characteristics (Mattila, Wirtz, 2001). The author introduces an alternative classification and states that any musical composition is comprised of at least three major dimensions: physical, emotional and preferential (the buyer's musical "taste").

Music tempos were examined by Andersson *et al.* (2012), who conducted the study by selecting different tempo (slow – 60 bpm / min and fast – 96 bpm / min) music and no music variables in order to investigate its connection with the consumer behaviour (adding a gender dimension), and found that the music tempo does not affect the amount of time visitors spend at the shop, and visitor's approach behaviour is stronger than avoidance; they feel more pleasure and have a positive opinion about the shopping experience when there is no sound of music in the shop. Despite these results, it was identified that the customer is willing to spend more money when any tempo of music is playing. The musical tempo effect was analysed in the context of electronic stores (Ding, Lin, 2012; Lai *et al.*, 2011).

The sound of music is another feature, the impact of which has been analysed in the scientific literature. In the study of Morrison *et al.* (2011), in addition to the sound, another environment variable – the smell and its relation with the user's emotions is chosen, which as it was identified, influences the consumer's behaviour, including the time spent in the store, the amount of money spent, the attitude and overall shop visit satisfaction.

The music feature – the genre – is notable for its abundance of categories. In the scientific literature, the authors Gjerdingen, Perrott (2008), on the basis of previous studies, identify the following music genres: blues, classical, country, dance, jazz, latin, pop, R & B (rhythm & blues), rap, and rock. Pettijohn *et al.* (2010) distinguish 14 main genres of music which can be categorized into 4 dimensions according to the impact on the individual similarity:

1. Blues, jazz, classical, and folk music (reflexivity and complexity dimension);
2. Rock, alternative music, and heavy metal (intensity and rebelliousness dimension);
3. Country, popular, and religious music (simplicity and optimism dimension);
4. Rap/rock, soul/funk, and electronic dance music (energy and rhythm dimension).

It should be noted that in this context, the musical genre is associated with the seasonal (Pettijohn *et al.*, 2010) and the festive music (Spangenberg *et al.*, 2005). Spangenberg *et al.* (2005) assign Christmas music to the festive kind of music, so there is a suggestion that the mentioned category extends the list of types of the music genres. The music genre as an e-environment stimulus example is the scientific research of Kim *et al.* (2009) (one music genre – the pop music effect was investigated), on the basis of which it can be assumed that it is appropriate to compare the effects of different musical genres on consumers' emotions. Thus, the following hypothesis was developed:

H2: The visitor's emotional response during online shopping will differ depending on the genre of background music.

H2a: The visitor's pleasure during online shopping will differ depending on the genre of background music.

H2b: The visitor's arousal during online shopping will differ depending on the genre of background music.

H3: The music genre has a positive impact on emotional response state.

Regarding the connection between a music genre and emotions, it should be noted that a certain music genre may lead to different manifestations of the emotional response (Sweeney, Wyber, 2002; Yalch, Spangenberg, 2000), but, as it was noted by Oakes (2000), it has not been identified which music genre is acceptable for most people and can positively influence consumer's emotions. According to Pettijohn *et al.* (2010), popular music is one of the music genres that is most associated with the expression of positive emotions, while classical music is attributable to the complexity dimension, therefore, there is a suggestion that it may stimulate negative emotions. On the basis of these statements, it was intended to investigate whether the emotional response significantly differs depending on the music genre, so the following hypotheses are going to be considered:

H3: The visitor's emotional response towards the background music will be higher during online shopping of hedonic than utilitarian goods.

H3a: The visitor's pleasure of the background music will be higher during online shopping of hedonic than utilitarian goods.

H3b: The visitor's arousal of the background music will be higher during online shopping of hedonic than utilitarian goods.

In this context, it is desirable to outline the concept of musicscape, which was suggested by Oakes (2000) on the basis of services cape model that has become a major milestone in planning music features effect on consumer behaviour. This model marks the interaction of such moderators as demographic characteristics – age, sex, or social class – and a piece of music awareness with the independent variables (music features – tempo, volume and genre). The model also highlights the impact of music, divided into the following categories: cognitive (expectations or perceived duration), emotional (mood) and behaviour (approach – avoidance, re-return and purchase possibility and purchase / length of stay). This model approves the importance of music, as an environmental element and the potential impact on the consumer's emotional response and behaviour.

1.4 Relationship between the emotional response and the intention to buy

Scientific literature analysis suggests that environmental factors that affect the individual's emotions can make influence on a variety of actions associated with consumer behaviour. Yalch, Spangenberg (2000) indicated as a possible response to environmental factors, distinguishing the following categories of actions: time (willingness/unwillingness to physically stay in the shop or the time spent in the shop); exploration (willingness/unwillingness to see the shop); communication (willingness/unwillingness to communicate with others in the shop, for example, employees) and satisfaction (positive shopping
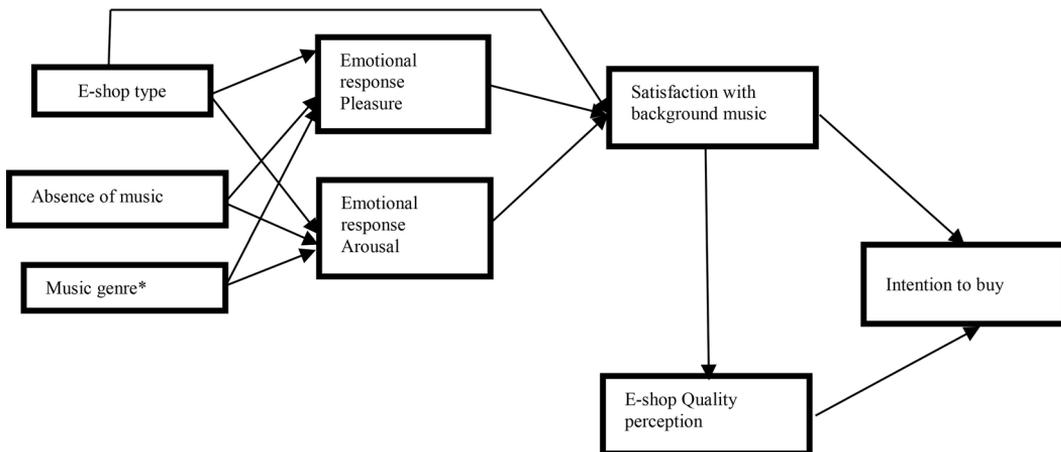
Figure 1. Research model. Source: Author's own elaboration.
(* G1 – no music, G2 – popular music, G3 – classical music, G4 – festive music)

experience). Thus, the following hypothesis was developed:

H4: The visitor's emotional response and the e-shop type will have an impact on their satisfaction with the background music.

The intention to buy is related to the context of the emotional response. Morris, Boone (1998) investigate the impact of music on the consumer's emotional response, the attitude towards the brand and intention to buy in advertising context. According to Kim, Lennon (2009), the connection between music and product presentation and the emotional response, which can increase or decrease the likelihood of buying online, should be investigated. The Kim, Lennon's (2013) study should also be mentioned, as it analyses the reputation and quality factors impact on the consumer's emotions, perceived risk and the intention to buy. Thus, the following hypothesis was developed:

Taking into consideration the context of electronic shops, the factors relevant to the overall assessment of the quality of e--shops can also be considered as stimulus making influence on consumer's emotions (Hsu, Tsou, 2011; Morin *et al.*, 2007; Kim, Lennon, 2009):

H6: The e-shop type has a positive impact on the satisfaction with background music.

H7: The visitor's satisfaction with the background music is positively associated with their intention to buy products through e-shops.

H8: The visitor's satisfaction with the background music will have impact on perception of the e-shop quality.

H9: The visitor's perception of the e-shop quality will have direct impact on their intention to buy products through e-shops.

It should be noted that the structure of this study model is also based on the SOR theory; in addition, the context of this study is an electronic store.

According to the scientific literature (Ding, Lin, 2012; Kim *et al.*, 2009; Morin *et al.*, 2007), it was identified that the response to environmental stimulus may depend on the buying situation – the reaction is related to different products' categories – utilitarian or hedonistic (Ding, Lin, 2012). Finalizing the theoretical background, the authors have developed a conceptual research model according the literature review (Figure 1).

2. Research methodology

2.1 The research instrument

In order to compare the respondents' emotional state dependency on the music genre, the

respondents were introduced to the PAD scale (Mehrabian, Russell, 1974) that measures the emotional state. This scale is used in many different types of studies (Koh, Kim, 2007; Eroglu *et al.*, 2003; Ding, Lin, 2012, *etc.*). It should be noted that this scale used in similar studies is modified leaving two dimensions (*i.e.* 12 pairs of propositions instead of 18) and eliminating the third, *i.e.* the dominance dimension. The reason for this is that it is sufficient to use two dimensions to measure the emotions caused by the environment stimulus (Cheng *et al.*, 2009). Ding, Lin (2012), Sweeney, Wyber (2002) also base their studies on two dimensions and this justifies the inclusion of any such scale into the research instrument. The measurement is performed after each manipulation of music genre, as well as after an absence of music. For factors Pleasure and Arousal the items each had loadings of 0.70 or higher. In view of a fact that adding items increases reliability, we choose the latter course as did Robert, John (1982). Reliability coefficients (alpha) were acceptably high for Pleasure (0.93) and Arousal (0.79), but the lower reliability of Dominance (0.65) suggests caution in generalizing from this measure.

The respondents' attitude toward a lack of music or genre of music was measured with a 9-statement scale, developed by Herrington, Capella (1996) and included 9 statements. Another construct was used to measure the electronic store quality dimensions. For this purpose, a 9 statement SITEQUAL scale, developed by Yoo, Donthu (2001) was used. The respondents' intention to buy was measured using the construct created by Kim, Lennon (2000). Statements of all scales were measured using a 7-point scale (1-strongly disagree, 7-strongly agree).

According to Field (2009), the scale is considered to be reliable if the Cronbach's Alpha α coefficient equals or is bigger than 0.6. Cronbach's alpha of the statements showed satisfactory level of scales reliability (see Table 1).

2.2 Experimental design

Two electronic shops were specially designed for the implementation of this experiment to simulate shopping in the cyberspace context: chocolate e-store (hedonistic goods), and mobile devices e-store (utilitarian goods). Product descriptions and other content elements were adapted according to the existing similar online shops maintaining basic electronic shop technical characteristics (*e.g.* product categories, a shopping cart, a payment process, *etc.*). During the study, the respondents were divided into two groups – each respondent was randomly assigned the case of hedonistic or utilitarian goods online shop (only one e-shop is visited). During the visit in the online shop, the participants of the experiment could get acquainted with the e-shop, *i.e.* see the range of products, read the descriptions of goods, *i.e.* perform all the usual functions.

While browsing the site, the participants heard the background music. Three music genre types were manipulated (the duration of each piece of music fragment was 20 seconds). Popular, classical, and festive music genres, as well as neutral music condition (no music), were used in the experiment.

Table 1. Satisfactory level of scales reliability.

Scale	Cronbach's alpha	Scale	Cronbach's alpha	Scale	Cronbach's alpha
Intention to buy	0.961	Pleasure G1	0.924	Arousal G1	0.585
E-shop quality perception	0.917	Pleasure G2	0.962	Arousal G2	0.645
Satisfaction with background music	0.937	Pleasure G3	0.928	Arousal G3	0.655
		Pleasure G4	0.929	Arousal G4	0.739

Source: Authors' own study.

The popular and classical music genre choice is based on Pettijohn *et al.* (2010) music genres division impact on an individual, festive music – depending on the time of the research (Christmas period). The music samples used in the research experiment:

● *Pop: The WEEKND Feat DAFT PUNK "I Feel It Coming"*
● *Classical: Ludwig van Beethoven "5th Symphony"*
● *Festive: Mariah Carey "All I Want For Christmas Is You"*

At the end of each piece of music fragment, the respondents were directed to the questionnaire page using a link, where they were asked to evaluate emotions induced by the piece of music. This procedure was repeated after each piece of music and after the period with no music, taking into consideration the induced emotions after each piece of the music genre or no music.

According to previous research (Ding, Lin, 2012; Kim, Lennon, 2013), the final number of the respondents whose questionnaires were acknowledged as valid, who evaluated both electronics and chocolate goods e-shops, is 211. The distribution of the respondents by gender is as follows: 142 women account for 67.3% of all the respondents, and 69 men, *i.e.* 32.7%. The number of the respondents

who evaluated the electronics e-shop is 107 (50.71%), and the number of the respondents who evaluated the chocolate e-shop is 104 (49.29%). The respondents by age can be divided into two main groups: younger than 21 years accounts for almost 40%, while those aged 21–29 years account for almost 60%.

Taking into consideration the model of this research, the data was analysed using two statistical methods: mixed ANOVA and linear regression. The Bonferroni criteria were applied for the data analysis.

3. Research results analysis

3.1 Music genre and the shop-type effect on the emotional response

A two-way mixed analysis of variance was conducted measuring the influence of two independent variables (e-shop type and music genre) on the emotional response (pleasure and arousal). The e-shop type included two categories (hedonistic goods – chocolate and utilitarian goods – mobile devices) and the music genre consisted of four types (no music, popular music, classical, and festive music). The dimension of emotional response (pleasure) was statistically significant at the .05 significance level except for the e-shop cate-

Table 2. *Music genre and the e-shop type effect on the emotional response (pleasure).*

Pleasure	E-shop	Mean	Std. deviation	N
No music	Hedonistic goods	2.35	1.27	104
	Utilitarian goods	2.03	0.90	107
	Total	2.19	1.11	211
Popular music	Hedonistic goods	4.79	1.69	104
	Utilitarian goods	5.26	1.44	107
	Total	5.03	1.58	211
Classical music	Hedonistic goods	3.08	1.32	104
	Utilitarian goods	2.98	1.17	107
	Total	3.03	1.24	211
Festive music	Hedonistic goods	3.77	1.23	104
	Utilitarian goods	3.91	1.04	107
	Total	3.84	1.13	211

Source: Authors' own study.

gories factor. The main effect for e-shop type yielded an F ratio of F(1, 209)=0.2, p=0.622, indicating that the effect for the e-shop type was not significant, both for hedonistic goods (M=3.50) and utilitarian goods (M=3.55). The main effect for music genre passed an F ratio of F (2.6, 543.7)=203.2, p<0.001, indicating a significant difference among music genres. The evaluation of pleasure was significantly lower for no music (M=2.19) compared with classical music (M=3.03, F(1, 209)=63.6, p<0.001), with festive music (M=3.84, F(1, 209)=231.8, p<0.001), and with the popular music (M=5.03, F(1, 209)=376.4, p<0.001). Such results support the hypothesis H1a. In addition to this, it is important to mention that the emotional response – pleasure was the highest in the case of popular music compared with festive music (Bonferroni p<0.001) and with classical music (Bonferroni p<0.001).

The interaction effect was significant, F(2.6, 543.7)=3.9, p=0.012, but it showed differences only in several situations. In the case of no music, the evaluation of pleasure was statistically higher for hedonistic goods (M=2.35) than utilitarian goods (M=2.03) F(1, 209)=4.4, p=0.037. An opposite difference was noticed for the popular music: the evaluation of pleasure was statistically

higher for utilitarian goods (M=5.26) than hedonistic goods (M=4.79) F(1, 209)=4.7, p=0.031. Finally, the e-shop type had no impact on the evaluation of pleasure when the classical music was used in the background F(1, 209)=0.36, p=0.552 or festive music was used in the background F(1, 209)=0.81, p=0.370.

The measurement of the emotional response – arousal was statistically significant at the .05 significance level except for the e-shop factor as well. The main effect for the e-shop type yielded an F ratio of F(1, 209)=0.85, p=0.357, indicating that the effect for the e-shop type was not significant for hedonistic goods (M=3.96) and utilitarian goods (M=3.89). The main effect for music genre passed an F ratio of F(2.7, 573.9)=21.8, p<0.001, indicating a significant difference among music genres. The evaluation of arousal was significantly lower for no music (M=3.57), compared with classical music (M=3.85, F(1, 209)=13.6, p<0.001), with festive music (M=4.21, F(1, 209)=71.2, p<0.001), and with popular music (M=4.05, F(1, 209)=25.6, p<0.001). Such results support the hypothesis H1b. In addition to this, it is important to mention that the emotional response – arousal was the higher in the case of festive music compared with classical

Table 3. Music genre and e-shop type effect on the emotional response (arousal).

Pleasure	E-shop	Mean	Std. deviation	N
No music	Hedonistic goods	3.69	0.99	104
	Utilitarian goods	3.46	0.86	107
	Total	3.57	0.93	211
Popular music	Hedonistic goods	3.88	1.01	104
	Utilitarian goods	4.23	1.05	107
	Total	4.05	1.04	211
Classical music	Hedonistic goods	3.92	0.91	104
	Utilitarian goods	3.79	0.82	107
	Total	3.85	0.87	211
Festive music	Hedonistic goods	4.35	0.96	104
	Utilitarian goods	4.08	0.85	107
	Total	4.21	0.92	211

Source: Authors' own study.

music (Bonferroni p<0.001). In-text references to tables are given in parentheses (Table 1), and the table with caption is placed as shown in the following example (preferably immediately below the reference). When the text is typeset, it will be situated as close to the reference as possible.

The interaction effect was significant for measurement arousal as well, $F_{(2.7, 573.9)}=5.97$, p=0.001, but it showed differences of strength of arousal only in several situations. In the case of pop music evaluation of arousal was statistically higher for utilitarian goods (M=4.23) than hedonistic goods (M=3.88) $F_{(1, 209)}=6.1$, p=0.014. An opposite difference was noticed for the festive music – evaluation of pleasure was statistically higher for hedonistic goods (M=4.35) than utilitarian goods (M=4.08) $F_{(1, 209)}=4.8$, p=0.030. Finally, the e-shop type had no impact on the evaluation of pleasure when the no music was playing $F_{(1, 209)}=0.34$, p=0.067 or classical music was played $F_{(1, 209)}=1.2$, p=0.266.

By summarizing all the above, it is possible to state that the presence of music is important for the emotional response (pleasure and arousal). Going deeper to various genres, we could conclude that the popular and festive music are quite influential for creating pleasure and arousal. The e-shop type was influential only together with the absence of music or certain types of music.

3.2 Emotional responses and the e-shop type impact on satisfaction with musical background

The next stage of the analysis focuses on the measurement of the impact of emotional responses and the e-shop type on satisfaction with musical background. Out of the selected 9 factors, just several had influence on the respondents' satisfaction with background music ($R^2=0.305$, $F_{(9)}=9.8$, p<0.001). The most influential factor was the emotional response – the pleasure created due to the absence of music (t=−5.88, p<0.001). It states that the lack of background music creates dissatisfaction, thus music must play. The next question is what music genre should be used. The pleasure received from both the festive music (t=3.46, p<0.001) and the popular music (t=0.12, p=0.1) had a positive impact on satisfaction with the background music. In addition, the pleasure derived from playing classical music had influence on the satisfaction as well (t=−2.058, p=0.041), but it had a negative effect. This result might be

Table 4. Emotional responses and the e-shop type impact on satisfaction with musical background.

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics VIF
	B	Std. Error	Beta			
(Constant)	3.505	0.611		5.736	0.000	
Pleasure "no music"	−0.564	0.096	−0.433	−5.877	0.000	1.567
Pleasure "popular music"	0.113	0.069	0.125	1.652	0.100	1.644
Pleasure "classical music"	−0.182	0.089	−0.157	−2.058	0.041	1.679
Pleasure "festive music"	0.350	0.101	0.275	3.457	0.001	1.829
Arousal "no music"	0.487	0.111	0.314	4.382	0.000	1.485
Arousal "popular music"	−0.003	0.095	−0.002	−0.027	0.979	1.378
Arousal "classical music"	0.240	0.131	0.144	1.829	0.069	1.803
Arousal "festive music"	−0.222	0.129	−0.140	−1.711	0.089	1.949
E-shop type	−0.256	0.180	−0.089	−1.421	0.157	1.134

Dependent Variable: satisfaction with musical background. Source: Authors' own study.

attributable to the age of the respondents, as they were quite young. All that allows us to accept the hypothesis H4.

Oppositely to pleasure, another aspect of emotional response – arousal – had almost no impact on satisfaction with the background music. Just one case – arousal appeared due to the lack of music – had an impact on the satisfaction (t=4.38, p<0.001). Thus, we reject the hypothesis H5 (except arousal derived due to a lack of music). Finally, the type of e-shop had no impact on satisfaction – we reject the hypothesis H6.

We could summarize that music has an impact on the satisfaction when background music is playing during purchasing in the e-shop. However, music has the impact on the increase of pleasure during purchasing in the e-shop. It is obvious that background music provides positive emotions but the satisfaction with the genre of music depends on the target audience behaviour.

3.3 Impact of music genres on the intension to buy in e-shops

The last part of analysis focused on evaluating a possible impact of music on the intention to buy products through e-shops. For this purpose, the regression analysis with three variables was used. Both independent variables – satisfaction with the background music and quality perception of the e-shop had the influence on the respondents' intention to buy products from an e-shop (R2=0.299, F(2)=44.3, p<0.001). The biggest influence was found for the perception of the e-shop quality (t=6.65, p<0.001), but satisfaction with the background music had a positive effect as well (t=2.90, p<0.01). Thus, we can accept H7 and H8.

According to the previous research, we can expect that satisfaction with the background music could increase the overall perception of e-shop quality and can have indirect effect on the intension to buy products through the

Table 5. Impact of music genres on the intension to buy in e-shops.

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	**Std. Error**	**Beta**		
(Constant)	0.618	0.490		1.261	0.209
1 Satisfaction with background music	0.200	0.069	0.189	2.904	0.004
Quality perception of the e-shop	0.639	0.096	0.434	6.648	0.000
Model (Dependent Variable: Quality perception of the e-shop)					
2 (Constant)	3.750	0.239		15.696	0.000
Satisfaction with background music	0.327	0.044	0.456	7.406	0.000

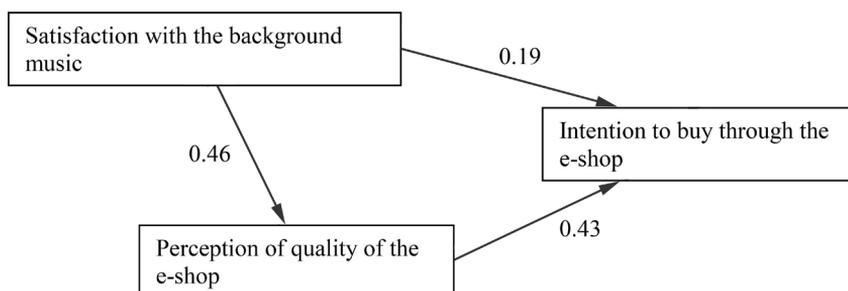*Source: Authors' own study.*

Figure 2. Impact of music genres on the intention to buy in e-shops. Source: Authors' own study.

e-shop. Additional regression proved the expectation – the satisfaction with the background music had a positive effect on the quality perception of the e-shop ($R2=0.208$, $F(1)=54.85$, $p<0.001$). $t=7.41$, $p<0.001$. Thus, we accept the hypothesis H7.

Summing up, we can state that music has a indirect effect on the respondents' intention to buy products through e-shops. Music can increase pleasure and satisfaction with the background music. That has the direct impact on perception of quality of the e-shop and the intention to buy. In addition, satisfaction with background music has not a big directly influence on the intention to buy through the e-shop (Figure 2).

4. Discussion and conclusions

While comparing this part of study results with similar studies, it has been identified that the musical effect on the emotional response that is statistically significant is not always identified (Kim, Lennon, 2009) – while analysing the results, the authors made an assumption that this could be caused by one genre of music (popular music) choice. The results of this study showed that the manipulation of different music genres makes it possible to assess whether there are differences between the music genre impact on the emotional response, therefore, the authors' assumption has been upheld. According to other research examples (Ding, Lin, 2012), the music (music tempo feature was investigated) impact on the emotional response differences depending on the product category were identified – the authors do not recommend using music as an environmental factor in utilitarian goods stores, as the usage of music as the background of the e--shop only makes sense in hedonistic goods e-stores.

It should be noted that the analysis of the data using two methods confirmed the theoretical assumption that using ANOVA,

statistically significant differences can be found, and using ANCOVA statistically significant differences were not identified. This statement confirms research topicality mentioned in the theoretical part of the paper that there is the lack of similar research studies – it is not purposeful to investigate the impact of music not taking into consideration the overall environment context. In the case of this study, it is obvious that the additional factor (quality) control and no control showed different results of the impact of music.

By analysing the relation between these three factors: music genres, the quality factor and type of shop and their impact on the emotional response, and the impact of the emotional response on the intention to buy are further investigated. This is done using the regression analysis method. The Backward method is used; multicolinearity (VIF) and autocorrelation (Durbin Watson) assumptions are questioned. According to Annex 3 presented in Table 4, ANOVA, $p<0.05$, therefore, it could be stated that the model makes sense. According to Table 5 presented in Annex 3, R2 value indicates that the model explanation of the distribution by almost 50%. VIF<4, therefore it is identified that there is no multicollinearity. The autocorrelation is also not identified (Durbin Watson value equals 1,730).

According to the table of coefficients, investigatory variables impact on the intention to buy has been identified: when there is no music, the emotional response has a negative impact on the intention to buy; when there is sound of the popular genre of music, the emotional response has a positive impact on the intention to buy; the quality factor has a positive impact on the intention to buy.

It should be noted that the festive music genre variable is eliminated as the least significant due to the backward method selection.

With reference to the results obtained using the regression analysis method, it has been concluded that the emotional response is positively associated with the intention to buy

to buy when popular music is playing, furthermore, the positive impact is identified when the quality factor is operating. When no music is playing, the emotional response has a negative impact on the intention to buy. Taking into consideration these findings it can be stated that the H4 is approved in both cases.

The study limitation could consist in the fact that the same respondent evaluated only one of the online stores – it is useful to compare the same respondent's emotional response and intention to buy both utilitarian and hedonistic products in e-shops.

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