Impact of In-store Music on Shopper Behavior

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Store atmospherics, in-store behavior, music, genre of music

Abstract
Store atmospherics is becoming an important determinant of differentiating products and services across the globe. A number of papers have researched about store atmospherics and their impact on customer / shopper behavior. We observed that studies incorporating these facets were missing out in the Indian context. In order to analyze the impact of in-store music on shopper behavior in a retail setting, a simulated retail outlet was created. For sake of simplicity the merchandise was restricted to chocolates, toiletries and stationery items. Using two samples – one exposed to music (experimental sample) and second not exposed to music (controlled sample) the study tried to assess differences in shopper behavior in terms of the time spent in the store, the type of merchandise selected and value of merchandise purchased. If there was an impact, to what extent did the genre of music play a role in influencing customer behavior? Did music create the desired Affect in terms of creating a sense of pleasure and arousal?

Results of the study indicate and strengthen existing beliefs about the importance of music on shopper behavior. While Western pop music influenced the time spent in the store, Indipop had a higher influence on the amount of money spent on merchandise. Indian classical music created a higher pleasure score whereas Western Instrumental created a higher arousal score.
It is suggested that such studies can be carried out in varied service formats and in actual settings in India to further validate the results of the study.

Introduction
The nascent Indian retailing scenario is witnessing rapid change. Large corporations are eyeing the huge Indian middle and upper middle class with their retailing strategies to cater to the fast changing tastes and preferences of Indian customers. In order to differentiate themselves retailers are making all out efforts to induce the customer. Speaking specifically about the organized retail industry it is seen that in more advanced nations where services are professionally established and run (especially the retail sector) a great deal of importance is being given to in-store environment. In the Indian context we witness that the industry is just catching up with some of the best practices. A study by the National Institute of Design, Ahmedabad (2008)[1] points out that despite the presence of global brands etc there has been a lack of understanding and application in terms of space utilization, interior atmospherics leading many to comment that Indian retailing has a long way to meet international standards. Despite these hiccups organized retailing in India is growing and is expected to reach global standards in a short time.

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[1] Economic Times (August 9, 2008) "Indian retail sector fails consumer-friendly test".

Retail managers, in an attempt to capture customer attention continually plan, build and change physical surroundings of their retail outlets (Turley & Milliman, 2000)[2]. In doing so, they are managing what is called in modern retail language as 'retail designing'. Retail managers are now seriously looking at atmospheric stimuli like exteriors, general interiors, store layout, interior displays and human variables in order to create greater customer satisfaction, enabling a greater extent of time being spent by customers in stores. Apart from these areas of improvement, managers are also considering the softer aspects of store atmospherics such as music and scent.

Past research has examined the main effects of many pleasant ambient stimuli such as music (Mattila & Wirtz, 2001)[3] and their subsequent impact on customer satisfaction. According to Bruner (1990)[4] music has long been considered an efficient and effective means for triggering moods and communicating non-verbally. Music has become a major component of consumer marketing especially in retail outlets. Despite knowing its importance not many managers and decision makers seem to have concentrated on this. This is unfortunate because music is an atmospheric variable readily controlled by management (Milliman, 1982)[5].

Though an important variable, this area has received sparse attention both in research and actual settings. This study was partly motivated by this gap that such a study was not undertaken in the Indian context.

Very specifically the purpose of this study was to understand how the presence of music in a retail setting impacts customer behavior. The study has widespread implications for the organized Indian retailing industry in particular and for services in general.

Review of Literature and Hypothesis formulation

Studies abound in this area which, to the knowledge of the authors and available public sources is primarily restricted to the Western context. We discuss some notable papers in the area of the impact of music on shopper intentions and behavior and try to identify relevant hypotheses for our study.

In a highly cluttered marketplace, one of the more important ways in which a retailer can differentiate from competitors is by offering an attractive value proposition. The differentiation could arise from any one platform viz., the physical platform comprising the size, design and layout, the social dimension comprising the store personnel and the class of shoppers and the ambient dimension or the store's "background" stimuli (Baker, 1986)[6].

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[2] Turley L.W. & Ronald E Milliman (2000), "Atmospheric Effects on Shopping Behavior: A Review of the Experimental Evidence",Journal of Business Research, 49, pp 193 – 211.

[3] Mattila S Anna , Jochen Wirtz (2001), "Congruency of scent and music as a driver of in-store evaluations and behavior", Journal of Retailing, 77, pp 273 – 289.

[4] Bruner, Gordon C (1990), "Music, Mood and Marketing", Journal of Marketing, 54, 4, pp 94-104.

[5] Milliman, Ronald E. (1982), "Using Background Music to Affect the Behavior of Supermarket Shoppers", Journal of Marketing, Summer 1982, 46, pp 86.

[6] Baker, J. (1986), "The role of the environment in marketing sciences; the customer perspective", in Capeil, J.A. et al. (Eds), The Services Challenge: Integrating for Competitive Advantage, AMA, Chicago, IL, pp. 79-84

The impact of ambient factor on the shoppers' attitude was postulated by the environmental psychology model (Mehrabian & Russell, 1974)[7] which hypothesizes that music affects approach avoidance behaviors through an emotional response. Over thirty years of academic research clearly demonstrate the nature of the influence the retail environment can have on consumer perceptions and behavior. The ability to modify in-store behavior through the creation of an atmosphere has been acknowledged by many retail executives and retail organizations (Yalch & Spangenberg, 1990[8]., Chebat, Gélinas-Chebat and Filiatrault, 1993[9]; Dubé, Chebat, and Morin, 1995[10]). In a review of some 60 experiments that manipulated portions of a store's complex atmosphere, Turley and Milliman (2000)[11] remark that each of these studies uncovered some statistically significant relationship between atmospherics and shopping behavior.

Milliman (1982)[12] examined the effects of background music on in store shopping behavior in a supermarket. Using experimental design groups Milliman used different settings such as (1) no music (2) slow tempo (72 beats or lower) and (3) fast tempo music (94 beats and over). Results of the study indicate that (a) Pace of in-store traffic was slower with slow tempo music. (b) Higher sales were consistently recorded with slower tempo music while lower sales were associated with faster tempo music. (c) Analysis of data using chi square test did not reveal any significant findings relating to awareness of music playing in the store's background while the respondent was shopping.

A study conducted by Milliman (1986)[13] tried to understand the impact of music on consumers in a restaurant setting. He based the study on the AAD which states that people respond differently to different environmental settings (Mehrabian and Russell, 1974[14],

[7] Mehrabian, A and Russell, J.A. (1974) *An Approach to Environmental Psychology*, MIT Press, Boston, MA.

[8] Yalch, Richard F, and Eric Spangenberg (1990), "Effects of Store Music on Shopping Behavior", The Journal of Consumer Marketing, 7, 2, 55-63.

[9] Chebat, Jean-Charles, Claire Gélinas-Chebat, Pierre Filiatrault (1993), "Interactive effects of musical and visual cues on time perception: an application to waiting lines in banks", Perceptual & Motor Skills, 77, pp. 995-1020.

[10] Dubé, Laurette, Jean-Charles Chebat and Sylvie Morin (1995), "The Effects of Background Music on Consumers' Desire to Affiliate in Buyer-Seller Interactions", Psychology and Marketing, 12, pp. 305-319.

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[12] Milliman, Ronald E. (1982), "Using Background Music to Affect the Behavior of Supermarket Shoppers" Journal of Marketing, Summer 1982, 46, pp 86.

[13] Milliman, Ronald E (1986), "The Impact of Background Music on the Behavior of Restaurant Patrons" Journal of Consumer Research, 13, pp 286 – 289.

[14] Mehrabian, A and Russell, J.A. (1974), *An Approach to Environmental Psychology*, MIT Press, Boston, MA.

Russell, 1980[15] and Russell and Pratt, 1980[16]). Findings suggested that consumers took longer time to complete their dinner when the music was on slow tempo. No significant differences on the amount of money spent was recorded on food items purchased but there were differences on alcohol spend.

Yalch & Spangenberg (1990)[17] looked at customer moods and perceived time spent in a retail setting. They analyzed whether background and foreground music formats had any differential impact on customers. Findings from their study suggest that shoppers respond psychologically and behaviorally to music though few consciously noted the presence of music. Shoppers felt more active when there was no music. The time of shopping and music setting did not create any distinctive impact.

Baker et al.,(1992)[18] added a new dimension to this field by introducing the idea of Ambient factor and Social factor. The impact of ambient cues (involving lighting and music) and social cues (number and friendliness of employees) were tested. Results of the study indicated that the ambient cues interact with the social cues to influence respondents' pleasure and arousal in the store environment.

Areni (1993)[19] studied whether playing (classical vs Top 40) background music in a wine store would impact (1) merchandise examined (2) handled (3) purchased and (4) time spent in the store. The study revealed that there was little or no impact of background music on the number of items examined, the number of items handled, the number of items purchased or the time spent in the store. Music, though, did influence the amount of money spent. Patrons spent more money when classical music was played than when Top-forty music was played. Rather than increasing the number of items purchased, classical music led the customers to buy more expensive items as compared to Top-forty music. Hence, we hypothesize that…

Hypothesis 1: Type of music played and Type of Merchandise selected in the store are independent.

Yalch (1993)[20] studied the effects of music on consumers shopping in different departments of a large apparel store. In all 106 respondents belonging to three broad age groups participated in an experimental design with one manipulated factor (type of music played), two context factors (men's sportswear and women's coats and dresses) and four self-reported factors (shopping purpose, shopping alone or with a companion, age and gender). Respondents were interviewed when leaving the store. The exact time when they were entering and leaving the store was recorded by observers. It was observed that music did not affect total expenditure because the average amount spent per person making a purchase was highest in the no music condition. Young shoppers (under age 50) preferred the foreground music and Older shoppers (50 and over) preferred background music. Moreover shoppers spent more money and also perceived the store to be friendlier when background music was played (as against foreground music) in the Women's department.

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[15] Russell, James A. (1980), "A Circumplex Model of Affect", Journal of Personality and Social Psychology, 39 (December), pp.1161-78.

[16] Russell, James A. and G.Pratt (1980), "A Description of the Affective Quality Attributed to Enviornments", Journal of Personality and social Psychology, 38, pp. 311-22

[17] Richard and Spangenberg Eric (1990), Effects of Store Music On Shopping Behavior. The Journal of Services Marketing. 4, 1, pp 36 – 39.

[18] Baker,Julie; Levy,Michael; Grewal,Dhruv (1992), "An Experimental Approach to Making Retail Store Environmental Decisions" Journal of Retailing. 68, 4, 445.

[19] Charles S. Areni (1993), "The Influence of Background Music on Shopping Behavior: Classical Versus Top-Forty Music in a Wine Store", Advances in Consumer Research, 20. pp 336.

[20] Yalch, F. Richard (1993), "Using Store Music For Retail Zoning: A Field Experiment" Advances in Consumer Behavior. 20, pp 632.

In the Men's department, shoppers were more likely to make a purchase and spent more when foreground music was played as against background music.

Duncan (1996)[21] studied the effects of music in service environments. His research centered on some important questions. Does the time shoppers spend in a service setting reduce due to loud music? Is there a relationship between the tempo of music and time spent in a service setting and does it impact the amount spent. MANCOVA for the difference in shopping time and purchase amount indicated no differences among the background music factor levels for either time or money spent. The tempo and volume of the background music did not influence shopping time or expenditures of shoppers. The MANCOVA for differences in shopping time and purchase amount indicate that preference for background music did influence behavior.

With the help of unstructured telephone interviews using exploratory open-ended questions posed to (quota sample) members of the Australian Hotels Association and Australian Restaurant and Catering Association and Areni (2003)[22] investigated "implicit" industry theories regarding the effects of atmospheric music on consumer behavior. It was found that music plays an integral part in creating an image of the hotel or restaurant and the pace at which diners eat can be influenced by the tempo of atmospheric music. None of the respondents made the inference that classical music can induce customers' to buy more expensive items. An interesting finding was that playing the "right" music induces customers to stay longer than they would have otherwise. "Heavy metal" was identified as a genre that encouraged aggression and Classical music as having the power to placate aggressive customers.

Hypothesis 2: Type of music played in the store and Time spent in the store are independent.
Hypothesis 3: Type of music played in the store and Amount of money spent in the store are independent.

Broekemier et al.,(2006)[23] evaluated the effect of different genre of music (happy/sad, liked/disliked) on shopping intentions at a women's clothing store. It was found that happy/sad music has a significant direct effect on shopping intentions. Most but not all subjects, liked the happy music more than the sad music. Thus, whether the music was happy or sad did influence people's liking for music. Moreover while playing happy music significantly increased subjects' intentions to shop in the stimulus store, shopping intentions were greatest when the music was liked as well.

Vida, et.al.,(2007)[24] tried to assess the impact of music valence on customer appraisal of store offerings as well as store personnel. Additional objectives of the study were to assess the length of shopping time and the value of purchase as also the influence of perceived music fit with the overall store image on the time spent in the store. Chi sq tests revealed that there was no direct effect of music on shoppers' appraisal of store offering and on money spent nor for the relationship between shoppers' appraisal of sales personnel on time and on money spent in the store. The study proved that background music induced positive feelings in shoppers.

[21] Duncan, Herrington, J. (1996) "Effects of music in service environments: A field study" The Journal of Services Marketing. 10, 2, pp 26.

[22] Charles S. Areni (2003) Exploring managers' implicit theories of atmospheric music: comparing academic analysis to industry insight", Journal of Services Marketing. 17,2, Pp 161-184.

[23] Broekemier, Greg, Ray Marquardt and James W. Gentry (2006), "An exploration of happy/sad and liked/disliked music effects on shopping intentions in a women's clothing store service setting", Journal of Services Marketing, 22,1, pp 59-67.

[24] Vida, Irena Claude Obadia and Michelle Kunz (2007) The Effects of Background Music on Consumer Responses in a High-end Supermarket International Review of Retail, Distribution and Consumer Research. 17, 5, pp 469-482.

In another study Vida (2008)[25] studied the merchandise evaluation, time spent and expenditure by shoppers based on perceived music fit. Data were collected from 259 shoppers in Ljubljana, Slovenia using store-intercept method as shoppers left the checkout counter from two hypermarkets and three specialty retailers focusing on sports merchandise (apparel and equipment). The study revealed that greater the perceived music fit, the more positive shoppers evaluative judgments will be of the merchandise resulting in longer time spent at the store. The time spent in a store has a positive influence on shoppers' expenditures and the perceived music fit with the retailer's image is significantly better when atmospheric music is planned than when atmospheric music is unplanned.

Sweeney and Wyber (2002)[26] studied how musical characteristics (tempo and genre) affect emotional states (pleasure and arousal) as well as cognitive processing (service and merchandise quality). The method adopted was a 2x2 between – subject experimental design, which manipulated two characteristics of background music – tempo (fast, slow) and genre (top 40, classical). The study revealed that liking of music was particularly related to service quality, merchandise quality and arousal. Familiarity of music was not significantly related to any of the emotional or cognitive outcomes.

Hypothesis 4: The type of background music played and the Affect created (pleasure and arousal) are independent.

Hypothesis 5: There exist no differences between the experimental group and the control group in terms of the time spent in the store and value of merchandise purchased.

With the above discussion the following objectives were identified.

Objectives of the study
The study was designed to achieve the following objectives...

1. To analyze whether an association exits between the types of music and
   a. Type of merchandise selected (H1)
   b. Time spent in the store (H2)
   c. Amount spent in the store (H3)

2. To assess how music in general creates an Affect on the respondent in an experimental setting and analyze whether an association exists between these scores based on the type of music played.(H4)
3. To assess the differences between the control and experimental groups on ….(H5)
   a. Time spent in the store
   b. Value of merchandise purchased

Methodology adopted
Taking sufficient cues and hints from earlier research papers and experiments, this study tried to look at how music or the lack of it could impact consumer responses and behavior in the store. In order to conduct the study a simulated shop environment was created. Four types of music were identified (English pop, Western instrumental, Indian classical and Indipop). Two groups of students were identified, one the Experimental group and the other the Control Group. (n=51 for the experimental group and 49 for the control group). The Experimental group was further divided into four groups and exposed to one type of music each. The Control group was not exposed to any music. Because of the experimental nature of the study the merchandise on display was restricted to *chocolates,*

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[25] Vida, Irena (2008) "The Impact of Atmospherics On Consumer Behavior: The Case Of The Music Fit In Retail Stores", Economic and Business Review. 1,1, pp 21-35.

[26] Sweeney, Jullian C. and Fiona Wyber (2002), The role of cognitions and emotions in the music-approach-avoidance behavior relationship. Journal of Services Marketing,16, 1, pp 51-69

toiletries and greeting cards – categories to which the students closely relate to. Music was played via speakers concealed in the wall. The music player too was concealed so that nobody saw the source of music.

The experimental and control groups were given an initial briefing in separate rooms on the nature of the study and asked to consider purchasing the merchandise displayed in the simulated environment. No mention of the presence or absence of music was made to any group to avoid any kind of preconceived judgments or getting alerted that would have resulted in respondent bias.

To begin with, students belonging to the experimental group were sent in groups of two to three members into the simulated shopping environment. They went through the merchandise on display, purchased the items and while paying cash were given the questionnaire. Similarly, in the no music scenario students went through the merchandise and were asked to rate the environment and were analyzed for the amount spent shopping for the merchandise. Only the experimental group was asked to respond on feelings and arousal (using the Affect Grid of Russell and Mendelsohn, 1989[27]).

The questionnaire was designed to capture the following….

Question	Experimental group	Control Group
Consciousness about music while shopping	Yes	No
Familiarity with the music played	Yes	No
Necessity of music in the store	Yes	No
Time spent in the store due to the music	Yes	No
Product evaluation due to music	Yes	No
Affect (Pleasure) score	Yes	No
Affect (arousal) score	Yes	No

Table No. 1

Differences between the two groups of respondents were captured on the following counts..
1. Time spent in the store
2. Merchandise selected
3. Value of merchandise

Sample breakup

Group	Type of Music Played								Total		
	Indian classical		Western instrumental		Western pop		Indipop				
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	
Experimental	8	4	5	6	7	6	7	8	27	24	51
Control	(no music played) ⟹								18	31	49
Total									45	55	100

Table No. 2

Operationalizing the variables
Dependent variables

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[27] Russell, J.A., Weiss, Anna., Mendelsohn, G.A (1989), Affect Grid : A Single Item Scale of Pleasure and Arousal, Journal of Personality and Social Psychology, 57, pp 493 – 502.

Amount of money spent while shopping was taken as the dependent variable. This measure was taken based on the actual billing value obtained from the merchandise purchased by the respondent.

Time spent in the store was taken as the second dependent variable as it is hypothesized that greater the time spent greater the likelihood for product evaluation and purchase. The time was recorded based on one single entry time and multiple exit times as different respondents spent different times while shopping.

Arousal and pleasure was calculated using the Affect Grid scale originally developed by Russel and Mendelsohn (1989)[28]. It is a single item scale that measured Arousal on a 9 point scale (caused sleepiness to aroused my feelings) and Pleasure measured on a 9 point scale (extremely unpleasant to extremely pleasant). Respondents who were exposed to the music were assessed here.

Independent variables
    a. Type of music played in the store
    b. Type of Merchandise displayed in the store

Hypothesis testing
H1: There is no association between type of music played and type of merchandise selected

Category Preferred	Type of music played				
	Indian classical	Western Instrumental	Western pop	Indipop	Total
Chocolate	3	7	8	7	25
Greeting cards	5	2	2	4	13
Toiletries	4	2	2	5	13
Total	12	11	12	16	51

Table No. 3

Chi square test shows significant association for us to reject the null hypothesis of no association. (Chi square = 21.336 , p value = 0.011, df 9)

H2: Type of Music played in the background and time spent in the store are independent.

Time spent in Store by Music type

	N	Mean score	SD
Music Type			
Indian Classical	12	5.5	1.73
Western Instrumental	11	5.72	1.27
Western Pop	12	6.23	1.36
Indipop	16	4.28	0.82

Table No.4

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[28] Ibid

ANOVA table					
Time spent in store (in minutes)					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	166.893	4	41.723	23.84	0.000
Within Groups	166.267	47	1.75		
Total	333.16	51			

Table No.5

The differences were significant. The type of music does play a role in how much time respondents spent in the store. Western pop had the highest patronage among respondents. The hypothesis was rejected.

H 3: Type of Music played in the background and amount spent on merchandise are independent.

	N	Value of merchandise	
		Mean	Std. Deviation
		Rupees	Rupees
Indian classical	12	21.17	11.33
Western instrumental	11	13.55	17.08
Western pop	12	13.77	15.33
Indipop	16	20.07	13.26
None	49	11.22	7.52
Total	100	14.24	11.77

ANOVA Table					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1516.03	4	379.007	2.949	0.024
Within Groups	12208.21	95	128.507		
Total	13724.24	99			

Table No. 6

Overall the average amount spent in the music condition was higher than the no music condition. See **table 6** for mean scores. There are significant differences between groups based on the type of music played and the actual amount spent by the respondent on purchase of the selected merchandise. The null hypothesis is rejected.

H 4: Pleasure and Arousal scores are independent of the type of music played.

Type of Music	Indian classical	Western Instrumental	Western Pop	Indipop	**Total**
	N / Mean	N / Mean	N / Mean	N / Mean	N / Mean
Pleasure score	12 /5.58	11 / 4.55	12 / 3.85	16 / 4.14	51 / 4.50
					F value = 2.149

					P value = 0.107
Arousal Score	12/ 5.5	11 / 5.73	12 / 3.77	16/ 3.86	51 / 4.64
					F value = 3.374 P value = 0.026

Table No.7

The differences are only significant on the arousal score. The hypothesis could not be rejected totally.

H5: There are no differences between the control and experimental groups on (1) time spent in the store and (2) value of merchandise purchased.

	Group	N	Mean	SD	't' value / d.f	significance
Value of Merchandise (Rs)	Experimental	51	17.26	14.31		
	Control	49	11.22	7.52	2.64 / 98	0.01
Time spent in the store (in minutes)	Experimental	51	4.74	2.2		
	Control	49	3.04	1.17	4.81 / 98	0.00

Table No.8

The differences between the two groups are significant as can be seen from the independent sample t test.

Findings, Conclusions and Limitations

Music is known to create a soothing effect on patrons in retail and other service settings. That its impact has been emphasized even in this study is no tall discovery. The study was a modest attempt at understanding the complex linkage between background music in a store and its influence on customers. To assess whether music does play a role, two groups of students were identified. One group was exposed to music and merchandise while the other was just exposed to merchandise alone. Product categories on display were restricted to those which were easily recognizable and respondents could relate to.

Key findings of the study suggest that there exists an association between the type of music and the type of merchandise selected. There is also an association between the type of music and amount of time spent in the store and value of merchandise purchased. Respondents spent more time in store when music was playing in the background compared to a silent scenario. The value of merchandise too showed significant differences with the respondents exposed to music spending a higher amount of money.

The type of music is an important determinant on the extent of time spent in the store. Western pop tended to attract the audience than other types. However, Indipop music type resulted in a higher spending by the respondents. Service organizations need to realize that music needs to be varied depending on the type of service setting and customer profiles. Differences between the Control group and the Experimental group were significant in terms of time spent and value of merchandise purchased etc.

The study has some definite limitations. Results have to be verified in an actual retail scenario. This will require necessary permissions from the retailers. A cross section of the consumers at various retail outlets exposed to a variety of music settings can throw additional light on the topic. The size of the sample too, we believe, can be slightly higher even in a controlled environment.

To conclude, we wish to state that this study was able to bring out the importance of music in a retail setting and retail managers can take a cue from this study and take necessary steps that will enhance customer satisfaction resulting in higher spending from their respective outlets.

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[1] Charles S. Areni (2003) Exploring managers' implicit theories of atmospheric music: comparing academic analysis to industry insight", Journal of Services Marketing. 17,2, Pp 161-184.

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