

# **Servitization and Value Co-production in the UK Music Industry: An empirical study of consumer attitudes**

Dr Glenn Parry†, Dr Oscar F. Bustinza‡\* and Dr Ferran Vendrell-Herrero‡‡

*†Bristol Business School, University of the West of England*

*‡\*Universidad de Granada*

*‡‡ Universitat Politècnica de Catalunya*

## **ABSTRACT**

Since the rise of music on the internet the record industry has reported falling total sales revenues. This has occurred at a time when technology has radically increased choice, availability and the opportunity for the consumer to purchase music. To date, pay-per-unit music sales channels have been more successful than music subscription services. As the music industry has moved from a product to a service business model, does the loss of sales indicate they have not taken their customers with them? This paper provides a description of different music consumer attitudes, an independent variable in this research, based upon quantitative analysis of more than 5000 valid survey responses. Consumer purchasing behaviour and music discovery methods are treated as dependant variables. An empirical study using Structural Equations Model was carried out to test the relationship between consumer groups and purchasing preference in relation to tangible products and intangible ‘service’ purchases. Moreover, consumer typology and propensity to actively engage with music communities was analyzed and thus their willingness to co-produce value was explored. The most important findings were, first, all consumers view pay per unit positively. And second, a group of consumers representing just under half the sample was identified that would engage with a monthly subscription music service and could co-produce solutions in this channel.

**Key words:** Servitization, Co-production, Music industry

## **Acknowledgement**

The researchers would like to acknowledge the support of Bristol Business School for providing support for the research. Oscar F. Bustinza acknowledges financial support from ECO2010-16814. Ferran Vendrell-Herrero acknowledges financial support from SEJ 2007-67895-C04.

# **Servitization and Value Co-production in the UK Music Industry: An empirical study of consumer attitudes**

## **1 Introduction**

The move by traditional manufacturing firms to generate revenue through provision of service associated with their product has been described as servitization (Vandermerwe and Rada, 1988). The benefits and feasibility of this strategy has been discussed widely (Vandermerwe and Rada, 1988; Anderson and Narcks, 1995; Matthyssens and Vandenbempt, 1998; Wise and Baumgartner, 1999; Ng et al., 2011). Firms seek to create greater value through integrated product and service offerings, Product-Service Systems [PSS] (Baines, et al., 2007; Neely, 2008). The music industry has been engaged in servitization for a decade, replacing the physical product with intangible music file provision via electronic portals which are substitutes for physical retail space (Graham, et al., 2004). The most prominent of these is currently the Apple iTunes offering which is integrated in many popular mobile devices and computers (RIAA, 2004; Oberholzer-Gee and Strumpf, 2007; Elberse, 2010).

Exchange value underpins the traditional view of the customer-producer relationship (Bagozzi, 1975) with each party exchanging one value unit for another e.g. a vinyl album for money. With the servitization of the music industry a physical product is often no-longer present at the point of sale. This may create a change in accepted paradigms as the notion of value has shifted towards a construct of value-in-use as the physical proxy of unitary value is absent for the consumer (Schneider and Bowen, 1995, Vargo and Lusch, 2004, Vargo and Lusch, 2008). The value-in-use construct is not new (Marx, 1867), but appears increasingly appropriate as physical items are replaced by intangible software; the value of a downloaded

music track is only apparent to the consumer when they listen to it, thus value in use is realized only in the process of consumption. Value may be further enhanced through wider availability of downloaded music and greater interactivity on social media. This media allows greater engagement and communication between the various players in the music industry and their consumer base, such that both parties can further contribute to service value creation (Parasuraman, et al., 1985). In these innovative new spaces the consumer experience is changed (MacIntyre et al., 2011). Consumers may elect to change role, from passive recipient to an active participant, mobilising their knowledge and resources to realise greater value and shape future strategy through exchanges between other music fans, the artists and industry providers, giving evidence for the construct of value co-production (Zeithaml, et al., 2006). Co-production requires that the customer plays an active role in developing the service offering (Lovelock and Wirtz, 2004) and this further allows them to co-create value, drawing upon different resources to attain desired outcomes when they consume music (Prahalad and Ramaswamy, 2003).

This new approach to music retail requires active participation by consumers and the use of their time, knowledge, skills and computing resource. Are all music consumers willing to engage and are they able to utilise their resources and co-produce value through these innovative new music channels? Declining sales may suggest that only a minority of consumers are willing to change from the product to the service model and further actively become co-producers (RIAA 2004; BPI 2010; PriceWaterhouseCoopers 2010).

This paper seeks to contribute to the extant literature, adding evidence to the issues raised through analysis of a unique and substantive dataset of 5,101 usable music consumer questionnaires for the UK. The paper will be structured; beginning with an overview of servitization and co-production and the main theories related to these concepts, a description of the research methodology used including a quantitative identification of the consumer

characteristics and their linked behaviours, and will finish with a discussion of implications for the music industry and opportunities for future research.

## **2 Related Literature**

### **2.1 Purchasing Behaviours: The Impact of Servitization**

A servitized firm may be considered as an integrated bundle of both goods and services (Robinson, et al., 2002) and is defined as a strategic innovation in an organisation's capabilities, representing a shift from selling products to selling an integrated product and service offering (Baines, et al., 2007). Servitization is seen as one of the best ways for manufacturing firms in developed economies to address the five forces that influence an industry's dynamics and inherent profitability (Porter and Ketels, 2003; Neely, 2005). Servitization may be conceptualised as the transformation of a firm from a focus upon selling products to selling complete solutions (Baines, et al., 2007).

The nature of products is well understood and research has a long provenance (Smith, 1776, Demsetz, 1993, Hill, 1999). Products are physical objects for which a demand exists, over which ownership rights can be established and whose ownership can be transferred from one institutional unit to another through market transactions (SNA, 1993).

As marketers began to recognise and emphasize the importance of services (Fisk, et al., 1993) they consequently called for services to form a separate part of a companies' marketing strategy (Lovell, 1983). Whilst agreement has been reached by academics over product characteristics, which may include tangible, non-perishable, separable and homogeneous, clarity over the nature of service and its definition has proved more difficult (Parry, et al., 2011). There is broad agreement that service characteristics may include their Intangible nature; their Heterogeneity due to context, as opposed to homogenous mass manufactured product; the Inseparability of service production and consumption; and that they Perish in the very instance of their creation (Chase and Aquilano, 1992; Hill, 1999; Miller, 2000; Gadrey,

2000; Bowen and Ford, 2002). These characteristics, identified by the acronym 'IHIP' provide a set of generalities around service constructs which may differentiate them from products.

Clarification of the difference between product and service may be an argument which remains extant in literature, though focus is also placed upon their practical integration. Many firms may be viewed as combining both product and service offerings (Neely, 2008). This integration of products and services has been labelled a 'product and service system' [PSS] (Baines, et al., 2007). However, firms continue to be classified as product or service based and the management of a service firm is different from the management of a product firm (Bowen and Ford, 2002). It is the movement away from the accepted product model and the effect on customer and associated music industry revenue which is of interest in this paper.

This paper explores the difference this move from product based business has made for consumer groups and revenue streams in the music industry. For the sake of simplicity and clarity in this paper it is understood that product in music industry is related to music in physical support (i.e. CD) and service is related to music in digital support. Following Farr (2006) this work considers that service retail provision in the music industry could take two forms, similar to mobile phone service contracts. First, '*pay as you go*' describes customers who are under no obligation or incentive to use the service and are free to choose when, where and how they do so, paying only per downloaded track. The attractiveness of this business model is that in transactional terms it replicates the high street retail experience and so can remove some of the barriers to entry such as commitment to purchase or organisational membership, whilst introducing new people to the electronic service on offer and thus opening up the market. This is useful to the customer who is unsure as to just how much of a service they may desire and it makes their budgeting easier since the cost per unit is known. Second, '*pay monthly*' represents a model where the consumer commits to paying a monthly

fee, potentially over a fixed period, and in return gains access to an allotted music service. As the music industry is based on property rights each exchange should be rated with a price. In this business model, with increased usage unit price reduces to a point that should be lower than that of the pay as you go model, with a maximum limit to the monthly consumption. This business model incentivises consumption and relies on customers overestimating how much use they will make of the service. According to Farr (2006) downloaded music conventional pay as you go models (such as Apple's iTunes) have been much more successful than the pay monthly models (such as the present-day Napster and Spotify offering). Work here explores if different typologies of consumers have different preferences for these two service models.

### **2.1.1 Mode of commercialization and the evolution of turnover in the music industry**

Elberse (2010) differentiates between three categories of product-service offered by the music industry: the physical album, the digital album and the digital single (or track). The first one is related to product and its sales are clearly decreasing (with some exceptions during Christmas periods). The second (also called bundled digital music) does not seem to have an important presence in the market. Finally, the evolution of the sale of digital music as a single song or track (unbundled music) is clearly dominant. Elberse (2010) raises the following question: Is the unbundled nature of digital music affecting the total turnover? She found empirical evidence that unbundling in digital format negatively and significantly affected the volume of sales in the music industry but that this effect is smaller for bundles containing items that are more equal in their appeal and for bundles offered by producers with a strong reputation.

Data from The British Recorded Music Industry (BPI 2010) shows a direct correlation between the UK market and the work of Elberse (2010). Growth in online sales of both singles and albums are failing to substitute for revenue lost from physical sales, thus sector revenues are shrinking. But, is this evolution independent of the change in commercialization

model? The BPI 2010 data indicates that, on average, the sector is losing revenue at an annual rate of -6.8%, with total revenue over £1,200 million in 2001 reduced to £635 million in 2010. The digital format is clearly gaining revenue and presence in the UK market and market share moved rapidly from 0.2% in 2004 to 21.9% in 2010 with revenues for this format now close to £180 million.

Service based music is, however, not yet substituting like for like sales of physical product. The evolution of the service sector has brought new online virtual music stores as competitors in the market (Graham, et al., 2004). Coupled with the entry of the large supermarkets into the music retail sector, now contributing around a quarter of the market sales, this has had an adverse effect on the traditional high street based music retailers, with large music retailers such as Woolworths, Virgin MegaStore and MVC going out of business and only one chain, HMV remaining (VERDICT, 2010). Figures in the Verdict report for entertainment sales (including film and computer games) indicate that the loss of high street retailers has reduced the dedicated shop floor area available for physical music retail significantly - and potentially the space to physically engage with consumers - which may be impacting on overall sales.

A further theoretical explanation for this sectoral decline is that servitization (i.e. digital format) allows customers to substitute illegal downloads for legal digital purchases (Ouellet, 2007; Coyle, et al., 2009), thus reducing revenues. The lack of features associated with the digital product, such as liner notes or cover art, perhaps previously limited this form of substitution for physical product. Whilst illegal file sharing frequently features in popular media (e.g. Robinson, 2010; Mears, 2010), one quantitative report shows illegal downloads have an effect on sales that is statistically indistinguishable from zero (Oberholzer-Gee and Strumpf, 2007). File sharing may actually have a positive effect as it allows users to learn about music they would not otherwise be exposed to and may increase sales (Peitz and

Waelbroeck, 2006). Whilst Oberholzer-Gee and Strumpf do not provide evidence of possible causal relationships they suggest some alternatives such as (i) lower revenues are a result of the switch from selling in record stores to more efficient but lower priced discount retailers such as supermarkets, (ii) the ending of a period of atypically high sales, when consumers replaced older music formats with CDs or (iii) perhaps the growing competition from other forms of entertainment, such as video games. After examination of available literature and data, no conclusive evidence for the fall in sales revenue in the music industry was found.

## **2.2 Discovery Methods: Push Methods vs. Value Co-Production**

Music consumers may be unsatisfied with this new, prevalent music service business model. According to Prahalad and Ramaswamy (2004) the fact that consumers are still unsatisfied is a paradox, given the huge efforts conducted by firms to cover their requirements (consumers today have more choices of products and services than ever before). Prahalad and Ramaswamy (2000) criticised the industry view of the passive customer and claim the importance of the internet as a tool to stimulate communication between customers and producers. This new competence empowers the consumers and accordingly business and producers may draw upon this competence as a strategy to co-create value. They argue that the way to generate value might be a switch from value creation to value co-creation, where the consumer has an important role. This change of conceptualization derives from a specific characteristic of the service provision, namely, that the production phase cannot be disconnected from consumption activity (Lovelock and Wirtz, 2004). The quality of a service depends upon the customer and the level of their participation, resource and skills. For example a consumer with fast broadband will be able to interact more efficiently with music streaming services. Service co-production occurs when multiple parties resources are integrated to create a value proposition or service delivery process and value is co-created when that value is realised, usually evidenced in the economic sphere (Ordanini and Pasini,



2008). Hence, both co-production and co-creation constructs require parties to jointly employ their resources to create value.

Exploring the notion of value further, in the traditional-industrial product based view value equalled the price which the customer paid: ‘in competitive terms, value is the amount buyers are willing to pay for what a firm provides them’ (Porter, 1998:38); or, ‘value is what customers are willing to pay’ (Porter, 1998:3). While in the traditional-industrial view customers as consumers destroy the value created by producers, in the alternative (co-production) view customers co-produce and even co-invent value and may share this further. As a result, there are no ‘final’ customers in this emerging framework as consumers are factors in production (Ramirez, 1999:51).

This suggests that it is possible to differentiate between two distinct consumer behaviours. On one side are placed ‘passive’ consumers who follow the traditional-industrial view and are grouped under the name *Push*, as firms must actively push product or service to them. On the other side are those active consumers that are dynamic and collaborate in the production of value receiving the name of *Value Co-Producers*. Today, customers can engage in dialog with suppliers during each stage of design and delivery. This form of dialog should be seen as an interactive process of learning together (Ballantyne and Varey, 2006). The co-production of value is a desirable goal as it can assist firms, highlighting consumer’s perspectives, identifying their needs and wants and thus allowing for improvement in the front-end customer facing process (Lusch, et al., 2007). Prahalad and Ramaswamy (2003) posited that co-creation is based on experience and it is a new way to nurture innovation. The mechanisms of co-production and co-creation implicitly have the requirements that customer and firms meet or connect. Payne et al. (2008) model the encounter process between both parties and differentiate 3 independent processes:

- *Customer value-creating processes*: in a business-to-consumer relationship, the processes, resources and practices which customers use to manage their activities. In a business-to-business relationship, the processes are ones which the customer organization uses to manage its business and its relationships with suppliers.
- *Supplier value-creating processes*: the processes, resources and practices which the supplier uses to manage its business and its relationships with customers and other relevant stakeholders.
- *Encounter processes*: the processes and practices of interaction and exchange that take place within customer and supplier relationships and are needed to develop successful co-production opportunities.

Zhang and Chen (2008) developed a structural equations model in order to test whether the usual techniques of value co-production (i.e. involving customers in marketing and sales, service care or product development) really enhanced the perceived value from customers. They used survey data collected in China. The authors identified and empirically examined the two primary principles of value co-production system with customers. The emphasis of co-production with customers may not only positively impact on customerization capabilities (the customisation of output through personal interaction), but also directly impacts on service capability. These capabilities are significantly different from those generated from traditionally isolated value creation system. The results show that service capability has a positive impact upon a firm's customerization capability. According to the parameters reported in the article service capability seems to partially mediate the relationship between co-production activities and customerization (Baron and Kenny, 1986). Moreover, Lin et al. (2010) with a similar methodology and with survey data from 84 Taiwanese high-tech manufacturers found a positive and significant relationship between value co-production and the performance of the supply chain.

### **3 Model and Hypotheses**

#### **3.1 Music Consumer Attitudes and Purchasing Behaviours**

Firms have been encouraged to concentrate on delivering high-value services combined with their products to form solutions that fulfil their customers' needs (Wise and Baumgartner, 1999; Galbraith, 2002; Matthyssens and Vandenbempt, 2008). One of the reasons driving manufacturing firms into servitization is to lock in their consumers (Vandermerwe and Rada, 1988). The uptake of this model by the music industry is such that any analysis of music purchasing behaviour needs to include both product and service consumption. Consumer attitudes have been studied before in order to explain different relationships (see among others (Barksdale and Darden, 1972; Stuart, et al., 1987; Culnan, 1993; Chen, et al., 1994; Liao and Cheung, 2001; Schiefer, 2002; Smith and Eroglu, 2009).

Investigation of consumer attitudes to music purchasing and a preference for product or service is an important determinant in an analysis of the complete relationship. In order to test the relationship between groups of music consumers and preference for product or service initial hypotheses propose:

***H1a:** Music Consumers distinctive attitudes are directly related to their Music Purchasing behaviour, in particular with product consumption.*

***H1b:** Music Consumers distinctive attitudes are directly related to their Music Purchasing behaviour, in particular with service “pay as you go” consumption.*

***H1c:** Music Consumers distinctive attitudes are directly related to their Music Purchasing behaviour, in particular with services “pay monthly” consumption.*

#### **3.2 Music Consumer Attitudes and Discovery Methods**

Normann and Ramirez (1993) argue that value creation should be considered in terms of the value created through coproduction with suppliers, business partners, allies and consumers. Products and services become resources or enablers for the customer's value

coproduction and the locus of value creation moves from the manufacturing company to a collaborative process of coproduction such that value is co-created with the customer (Vargo and Lusch, 2008; Ordanini and Pasini, 2008). As offerings become more complex and draw upon multiple resource holders one of critical dialogues in value coproduction is held between companies and their customers (Normann and Ramírez, 1993). Resource Advantage Theory emphasizes the potential of developing the relationships established between firms and consumers (Parvatiyar and Sheth, 2000). Prahalad and Ramaswamy (2000) explain that the market has become a venue for proactive consumer involvement and they argue for co-opting consumers in value-production analysis. Thus competitive advantage may be gained from an active dialogue with consumers and to co-produce value propositions firms must seek to understand consumer characteristics and their propensity to engage in co-creation activity.

It is therefore important to analyze the relationships between the consumer groups identified and their attitudes towards how they discover music, either passively, requiring companies to *push* music to them, or actively, such that they may employ their own resources, seeking out new music and engaging in co-production. To test this two hypotheses are presented:

*H2a: Music Consumers distinctive attitudes are directly related to Music Discovery methods, in particular with push methods.*

*H2b: Music Consumer distinctive attitudes are directly related to Music Discovery methods, in particular with co-production methods.*

Analysis will therefore be undertaken into the relationships between the music consumer's attitudes, their music purchasing behaviour and the methods they employ to discover new music. A model of these relationships and constructs is presented in Figure 1

## **4 Methodology- Empirical Study**

### **4.1 Universe, Sample and Type of Investigation**

The authors decided to use an empirical investigation to verify the hypotheses proposed in this study. The study population selected to carry out the investigation is made up of resident music consumers in the UK. The statistical software SPSS 17.0 and EQS 6.1 was used to analyze the data included in the sample.

The questionnaire and responses were provided by one of the 'Big 4' global music companies. The utilised questionnaire had been undergoing iterative development for a number of years within the company's market research division. The questionnaire was extensive and the researchers selected a subset of questions directly relating to the attributes and characteristics of consumer behaviour relevant to this study. The subset selected was subsequently validated by industry experts for coherence. Obtained were a total of 5,101 valid questionnaire responses. All findings were fed back during teleconference and a physical workshop to industry experts and validated.

## **4.2 Main Scales**

### ***Music Consumers***

This scale is made up of indicators included in a questionnaire using a 5-point Likert scale (1= Total disagreement, 5 = Total agreement) to assess the distinctive music attitudes of consumers from the UK market data. It identifies four distinct characteristics of music consumers (Table 1), that are describe thus:

- Explorative consumer; people showing this attitude search out new music. They are keen to find new bands and are open to listening to and purchasing music of unknown artists.
- Early adopters; consumers with this attitude have an enthusiasm for music. They may follow fashions in music and adopt the associated images of the music they are known to listen to. Their music defines their style and choice of venue when going out.

- Cautious consumer; these consumers are financially constrained. They do not place such a high priority on music in their lives. They consider any purchases carefully.
- Band Fan; people who have this attitude follow specific bands and their purchase behaviour is mainly driven by the release of work from the bands they choose to follow.

Analysis of the principal components and exploratory factor analysis (EFA) of the scale indicates that there are indeed four categories, as the study of unidimensionality is positive. When confirmatory factor analysis (CFA) was continued complications arose in the model that required different adjustments to be made, fundamentally to correct the values of  $R^2 < 0.5$  so as to ensure that the measurement indicators were accurate. After determining that adjustments were required, it was deemed necessary to eliminate items DROP1, DROP2 and DROP3, so obtaining the indicators shown in Table 1 that validate the scale. The analysis of the scale's internal consistency produced a Cronbach's alpha value of  $\alpha = 0.928$ , which is a weighted average of the correlations between items and indicated that it was a valid measurement instrument for these purposes (Cronbach, 1951).

### ***Music Purchasing Behaviours***

This section returns to the concept of servitization dividing the scale in three groups. There are a number of service contract types possible, but identified were those which include pay as you go and pay monthly dimensions and an additional group of offerings classed as product items (Table 1). In constructing the measurement scale, a 5-point Likert scale (1= Total disagreement; 5= Total agreement) was employed.

EFA linked the indicators with their underlying latent factors, confirming the three types of music purchasing behaviours. Meanwhile CFA analysis of the scale's internal consistency yields a Cronbach's alpha value of  $\alpha = 0.929$ , so confirming that it is also a good instrument for measuring the constructs selected.

### ***Discovery Methods***

In this section music discovery methods are analyzed (are the consumer groupings active in value co-production or not?) and commercialization channels related to music consumer attitudes (the survey respondents preference for the new servitized music industry retail offering). The approach followed the same process as that utilised to analyse purchasing behaviour, again a 5-point Likert scale (1= Total disagreement; 5= Total agreement). As this is a multidimensional concept it was believed best to include indicators that measured both passive and active consumer approaches to discovering new music. The analysis pointed to the need to eliminate items DROP4 and DROP5 (Table 1) and the analysis of the scale's internal consistency yields a Cronbach's alpha value of  $\alpha = 0.952$ , so confirming that it is also a good instrument for measuring the latent variable selected.

## **5 Results**

CFA was used to find out to what extent the indicators selected for the different scales are reliable and valid and to define relations between the variables or constructs. The results are set out in Table 2. The reliability of each factor was calculated using composite (CR) and internal (alpha) reliabilities: the content analysis was supported by a review of the literature and through confirmation with professionals from the music industry; the convergent validity analysis was performed using the average variance extracted (AVE) and individual factor loading. Finally, the discriminant validity analysis establishes that over 50% of the variance of the construct is due to its indicators, the items selected for the different scales have greater factor loadings than the construct in which they are assigned and the variance between the indicators is greater in relation to their construct than the variance shared between constructs (Byrne, 2006).

A Structural Equation Model (SEM) was used, which is appropriate for the specification of a model whose relationships have been established according to the hypotheses. Once the path diagram had been introduced its validity was analyzed using a method similar to that

used with the different scales, affirming that the parameters of the relationships between the variables will provide significance and quantification sufficient to enable a determination of whether the hypotheses are supported.

The results of the structural analysis of the model are shown in Table 3 together with the goodness-of-fit indices for each construct. The ‘maximum likelihood’ was chosen as a robust method (Satorra and Bentler, 1994). First, the model’s goodness of fit was studied according to the recommendations of Hair et al. (2001). Three kinds of indicators were considered: measurements of absolute and incremental goodness of fit and measurements of parsimony. Included in the first group of indicators were the Goodness of Fit Index (GFI), the Root Mean Square Error of Approximation (RMSEA) and the Root Mean Residual (RMR). The second group of indicators included Compared Fit Index (CFI), Normed Fit Index (NFI), Tucker-Lewis Index (NNFI) and Adjusted Goodness of Fit (AGFI). For the last group, Normed Chi-square is selected. All the intervals of acceptance are shown in Table 3.

The results of the analyses are consistent with the hypotheses proposed above and therefore serve to support them (Table 4 and Figure 2). These results are in line with the proposed hypotheses of the study, namely that Music Consumers Attitudes are directly related to Music Purchasing and Discovery Methods.

## **5.1 Discussion of the Results**

The first model (Figure 1, Model 1) analyses the relationship between consumer groups and their purchasing preference in relation to product and service purchase. Results shown in Table 4 support hypothesis H1a ( $\lambda_1=0.558$ ,  $p>0.001$ ;  $\lambda_2=0.298$ ,  $p>0.001$ ;  $\lambda_3=0.011$ ,  $p>0.005$ ;  $\lambda_4=0.325$ ;  $p>0.001$ ) as all the different consumer groups (Explorative Consumer, Early Adopter, Cautious Consumer and Band Fan) showed correlation to product purchase. Thus, all behaviours are positively linked to a music industry model of traditional product related purchases.



When the relationship between consumer groups and a pay as you go service offering is tested (Table 4), that is H1b ( $\lambda_5=0.533$ ,  $p>0.001$ ;  $\lambda_6=0.236$ ,  $p>0.001$ ;  $\lambda_7=0.042$ ,  $p>0.005$ ;  $\lambda_8=0.351$ ;  $p>0.001$ ), the parameters also show positive relationships. Thus the consumer behaviours were all positively linked to purchases made through online service offerings based on unit transaction charges and therefore still based upon a traditional business model.

When the relationship between consumer behaviours and pay monthly service contract purchasing is tested (Table 4), H1c ( $\lambda_9=0.512$ ,  $p>0.001$ ;  $\lambda_{10}=0.382$ ,  $p>0.001$ ;  $\lambda_{11}=-0.023$ ,  $p>0.005$ ;  $\lambda_{12}=0.282$ ;  $p>0.001$ ), the Cautious Consumer parameter is negative and statistically significant. Thus, Cautious Consumers are unlikely to engage with a contracted music service offering.

Regarding Music Consumer Attitudes and Discovery Methods (Figure 1, Model 2), when analyzing the relationship between consumer categories and push methods (Table 4), H2a ( $\beta_1=0.469$ ,  $p>0.001$ ;  $\beta_2=0.020$ ,  $p>0.005$ ;  $\beta_3=0.185$ ,  $p>0.005$ ;  $\beta_4=0.366$ ;  $p>0.001$ ), the parameters are positive. Thus again it was found that traditional sales methods, with active vendor and passive consumer, are acceptable to all those demonstrating characteristic behaviours.

When the relationship with Value Co-Production is tested (Table 4), that is H2b ( $\beta_5=0.392$ ,  $p>0.001$ ;  $\beta_6=0.176$ ,  $p>0.001$ ;  $\beta_7=-0.062$ ,  $p>0.001$ ;  $\beta_8=0.356$ ;  $p>0.001$ ), the parameter for the Cautious Consumer group is negative and statistically significant. People with this behaviour would appear to resist engagement in interactive music selling and utilising their resources in the coproduction of value during the purchase of music.

What will the impact upon revenue be if these groups show different preferences for traditional product and value co-production based business models? The findings show that Cautious Consumers are resistant to interactive music selling – but how large is this group and will this behaviour type impact sales significantly? The method of factor analysis meant

that it was not possible to count the number of observations (individuals) exhibiting the characteristics for each behaviour type. For each observation only a value that gives the relative intensity of each characteristic for a person was available. To compliment factor analysis (variable reduction) Cluster Analysis was employed (observations reduction). A K-means cluster was performed with the imposition of 4 clusters, such that each cluster perfectly defines each individual's behaviour. However, analysis showed that a single individual could exhibit multiple different behaviours. The percentage breakdown of behaviours exhibited by the sample set is shown in Figure 3.

Analysis identified a group of people accounting for almost 29 % of the sample that behave as both Explorative Consumer and Early Adopter, groupings which would logically be coherent. Analysis also identified 17% of the sample with the characteristics of Band Fans. A group making up 37.5% of the sample were negatively related with all the behavioural characteristics except Cautious Consumer. A further cluster, 16.5% of the sample, appeared to exhibit characteristics consistent with all the behaviours, so it was named as "show all behaviours". Thus 54.0% (37.5%+16.5%) of the population is positively related to the characteristics of a Cautious Consumer. As they are positively related to Cautious Consumer attitudes they are also potentially resistant to value co-production. The 29% of Explorative Consumers and Early Adopters and 17% Band Fan consumers provide 46% of the sample who are identified as prime candidates with whom the industry may co-produce value offerings.

## **5.2 Moderating Effects Analysis: Age and Hours of Music Consumption**

Previous empirical studies found that variables such as age negatively affect the process of servitization (Sandulli, 2007). This suggests that age may be a factor with the data. It could be that younger people are more open to service offerings than older consumers. The dataset presented also had hours of voluntary music listened to. It is instructive to check whether

individual specific conditions can moderate the relations between music attitudes and the dependent variables. Although data availability is constrained it is possible to test the moderating effect for two individual characteristics: namely age and hours of music consumption.

To analyze the moderating effect of age and daily hours of music consumption multi-group analysis was performed. Groups were created on the basis of the moderating variable through quartile estimates, producing four groups with approximately the same number of observations. Satisfactory measures of the goodness fit of the model were obtained when unrestricting the parameters that relate music consumer's attitudes and the two dependent variables. However, when restricting those parameters to be equal in both groups of consumers, global fit measures are adequate but the Chi-squared Satorra-Bentler estimate moves down or up in some cases. Hence, according to the Chi-squared differences test, there are significant differences between the models. This indicates a different impact of music consumer attitude on music purchasing and discovery methods such that age and hours of music consumption turn into a moderating variable in this relationship. This moderating effect is therefore especially important for Early Adopters and Cautious Consumers and for the other attitudes, Explorative Consumer and Band Fan, the moderating effect is relatively small. The analysis of the parameters and reliability obtained in each case are shown in Table 5.

As an example comment is made only upon the results of Early Adopters. Regarding age and Purchasing Behaviour, the main conclusion for Early Adopters preferences for Service Pay Monthly is that preference increases slightly until the age of 40 (under 25 = 0.283, 25-40 = 0.292, 40-55 = 0.192, above 55 = 0.159) at which point preference begins to decrease (inverse U-shaped relation) which is consistent with the work of Sandulli (2007). With regards to Hours of music consumption, Early Adopters show an increasing preference

for a service pay monthly contract the more time they spend listening music (under 1h = 0.121, 1h-2h = 0.225, 2h-4h = 0.227, above 4h = 0.291).

Examining Discovery Methods, Early Adopters are increasingly interested in active methods, value co-production with the industry, as they get older, to a limit of 55 when this decreases. The youngest group are not interested. A change in attitude is observed from negative parameters in the youngest age group to positive in older groups (under 25 = -0,021, 25-40 = 0.086, 40-55 = 0.131, above 55 = 0.047). When analyzing their preferences for active methods coupled to daily hours of music listened to a U-shaped relationship was found reaching a negative minimum for the group of people listening between 2 and 4 hours (under 1h = 0.122, 1h-2h = 0.017, 2h-4h = -0.047, above 4h = 0.115). So, those Early Adopters who voluntarily listen to either a lot or a little music are interested in co-producing value, but those listening to moderate amounts appear less inclined to co-produce value. Further research is required to test the relationships and possible consumer behaviours that lie behind the findings.

## **6. Conclusions**

This paper provides a description of different music consumers based upon quantitative analysis and establishes relationships between the consumer attitudes and their purchasing preference in relation to pay as you go and pay monthly service contracts and traditional product consumption models. The move from traditional product to service based sales, dubbed 'Servitization', is being utilised by manufacturing firms in developed economies to address the five forces that influence an industry's dynamics and its inherent profitability (Porter and Ketels, 2003, Neely, 2005). However, data shows that within the music industry sector the move from traditional product retail to online service based music sales has occurred simultaneously with a reduction in sector revenue.

The relationship between consumer attitude types and their propensity to actively engage with music communities is analyzed, specifically exploring the potential for value created through coproduction with consumer. This paper continues the line supporting the hypothesis that the market can become a venue for proactive consumer involvement, using collaborative alternatives through value coproduction.

It is the author's view that the core value of this research for the academic arena is the links found between consumer behaviours and the constructs of service contracting and value co-production. These insights are not only limited to the case of music industry, since the authors are confident in interpreting the results in more general terms. The results to some extent complement the existing models of servitization (Neely, 2008) in which service provision provides a more cost effective competitive strategy for firms. The data analysis demonstrates moderating effects of age and time devoted to listening to music on purchasing preferences and music discovery methods. The results show that it is possible to determine market segments and from this patterns to increase purchasing selection or value co-production.

## **6.1 Managerial Implications**

The supply chain in the music industry is changing dramatically (Graham, et al., 2004). Despite the potential for supply chain cost savings that the digital based sale of music may offer, the revenues of the sector are decreasing significantly. The industry seems to be dependent on an increase in revenue from digital music, even given the potential risks of this segment and the falls in revenue that have occurred simultaneous with its evolution (Ouellet, 2007; Coyle, et al., 2009). From the analysis evidence is provided to support the following statements which may encourage further development of music industry servitization:

- Currently all the typologies of consumers are directly and positively related to product (i.e. CD) and service pay as you go (i.e. iTunes) mode of commercialization. This is

consistent with market reality since those modes of commercialization hold two important market conditions: *Immediate exchange* and *pay per unit*. But, what happens when the mode of commercialization does not follow these two conditions?

- The work proposes the development of the underexplored business model ‘service pay monthly’, as a solution for the industry to recover. The revenue stream gained from a required commitment of the consumer of a minimum monthly consumption in exchange of a reduction in the unitary price could benefit the industry.
- The analysis shows that just under half of the market, representing three out of four of the typologies of consumers-behaviours identified (explorative consumer, early adopter and band fan) are directly and positively related to the service pay monthly offering. This means that a priori those groups would be happy with the implementation of this business model and may actively help in its development and acceptance. It should be noted that according to the results cautious consumers are not currently interested in this business model.
- Age could be used as a tool for identifying individuals who may engage with a pay monthly business model. For Early adopters and Explorative consumers the potential interest in this model was shown to decrease after age 40. On the contrary, those displaying the characteristics of a Band Fan are more likely to engage as they get older.
- The digital format and internet portals allow consumers to listen to music for free in different ways (i.e. iTunes, YouTube, Spotify, LastFM etc.) before they make a purchase (previously this could only be done via radio). Results indicate that Early Adopters and Explorative consumers are likely to purchase more with an increase in the voluntary hours they listen to music. Targeting this group with free music may further aid the development and acceptance of a pay monthly offer.

One of the main differential characteristic of services is that the selling process cannot be disconnected from the production process (Lovelock and Wirtz, 2004). This implies that in service offerings the consumer can provide feedback more readily. This is an important element since the industry can benefit from active consumers. These active consumers are important source of strategic information. The evidence proposes the following statements for encouraging consumer involvement in the process of value co-production:

- All typologies are positively linked to push methods. Thus, firms can market a push service pay as you go model to all groups.
- The Cautious Consumer would appear to be most difficult to reach, being resistant to engaging actively in music forums. This characteristic is present within half of the market and could be responsible for the fall in sales revenue linked to the switch to digital sales formats. With the loss of high street retail space Cautious Consumers have little exposure to direct sales methods which may have encouraged them to purchase music. Playing music to them further deters them from purchasing. Thus revenue from this group may only be regained once service contacting methods have been better developed. Service value co-production should be undertaken with other groups and value propositions only offered to Cautious Consumers once the service process is understood and has become accepted practice.
- Methods of social marketing allow interaction with consumers. In those networks the firm may collect information of about potential consumers which may allow them to identify their behavioural characteristics and market product or service appropriately based upon the earlier findings presented.

## **6.2 Limitations and Future Research**

The present research has some empirical limitations that can be the origin of future research.

- *About the origin of the data:* Half the consumers in the dataset show a propensity for co-production of value. As this data is a result of an online survey panel, presumably respondents have online experience and are happy with this environment and thus this sample may have a bias.
- *About the level of analysis:* The analysis is focussed upon business-to-consumer relations. Future research into value co-production may include both the demand and supply side into a further theoretical or empirical analysis of servitization.
- *About the time frame:* Although important relations between the variables included in this study were found, the results must be interpreted with some caution as the study is exploratory and its goal is to explore interrelations between these variables. Moreover, since this is a cross-sectional or static analysis, it does not capture the dynamic nature of the factors that determine the relationship between the variables that affect the process of servitization and the presence of the active consumer. This means that, even if the relationships are significant, other factors not included in the current study may also play an important role.
- *About the context:* the analysis deals exclusively with UK data. It is true that declining revenues in music industry is a phenomenon shared in other contexts (Elberse, 2010) but as attitudes are measured it is not possible to generalise globally as there is no data to test if the result is highly country-specific. Future research should focus on the nature of the relations analyzed in other country contexts.

## References

- Anderson, J.C., Narks, J.A., 1995. Capturing the value of supplementary services. *Harvard Business Review*, 73 (1), 75-83.
- Bagozzi, R.P., 1975. Marketing as exchange. *Journal of Marketing*, 39 (4), 32-39.
- Baines, T.S., Lightfoot, H.W., Evans, S., Neely, A., Greenough, R., Peppard, J., Roy, R., Shehab, E., Braganza, A., Tiwari, A., Alcock, J.R., Angus, J.P., Bastl, M., Cousens, A.,



Irving, P., Johnson, M., Kingston, J., Lockett, H., Martinez, V., Michele, P., 2007. State-of-the-art in product-service systems. *Proceedings of the Institution of Mechanical Engineers -- Part B -- Engineering Manufacture*, 221 (10), 1543-52.

Ballantyne, D., Varey, R.J., 2006. Introducing a dialogical orientation to the service-dominant logic of marketing. In: Vargo, S.L. and Lusch, R.F., (Eds.). *Toward a service dominant logic: Dialog, debate, and directions*. New York: M.E. Sharpe.

Barksdale, H.C., Darden, W.R., 1972. Consumer attitudes toward marketing and consumerism. *Journal of Marketing*, 36 (4), 28-35.

Baron, R.M., Kenny, D.A., 1986. The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of personality and social psychology*, 51 (6), 1173-82.

Bowen, J., Ford, R.C., 2002. Managing service organizations: Does having a "Thing" make a difference? *Journal of Management*, 28 (3), 447-69.

BPI, 2010. *BPI Statistical Handbook 2010*. London: BPI.

Byrne, B.M., 2006. *Structural Equation Modeling With EQS: Basic Concepts, Applications, and Programming*. New Jersey: Lawrence Erlbaum Assoc Inc.

Chase, R.B., Aquilano, N.J., 1992. *Production and Operations Management: A Life Cycle Approach*. Homewood, Ill.: Irwin.

Chen, I.J., Gupta, A., Rom, W., 1994. A study of price and quality in service operations. *International Journal of Service Industry Management*, 5 (2), 23-33.

Coyle, J.R., Gould, S.J., Gupta, P., Gupta, R., 2009. "To buy or to pirate": The matrix of music consumers' acquisition-mode decision-making. *Journal of Business Research*, 62 (10), 1031-37.

Culnan, M.J., 1993. "How did they get my name?": An exploratory investigation of consumer attitudes toward secondary information use. *MIS Quarterly*, 17 (3), 341-63.

Demsetz, H., 1993. *The Nature of the Firm. Origins, Evolution and Development*. New York: Oxford University Press.

Elberse, A., 2010. Bye-bye bundles: The unbundling of music in digital channels. *Journal of Marketing*, 74 (3), 107-23.

Farr, R., 2006. Business model review. VIVACE document. VIVACE 2.1/CCC/P/000000

Fisk, R.P., Brown, S.W., Bitner, M.J., 1993. Tracking the evolution of services marketing literature. *Journal of Retailing*, 69 (1), 61-103.

Gadrey, J., 2000. The characterization of goods and services: An alternative approach. *Review of Income & Wealth*, 46 (3), 369-87.

- Galbraith, J.R., 2002. Organizing to deliver solutions. *Organizational dynamics*, 31 (2), 194-207.
- Graham, G., Burnes, B., Lewis, G.J., Langer, J., 2004. The transformation of the music industry supply chain: A major label perspective. *International Journal of Operations & Production Management*, 24 (11/12), 1087-1103.
- Hair, J.F., Anderson, R.E., Tatham, R.L., Black, W., 2001. *Multivariate Data Analysis*. London: Prentice-Hall Pearson Education.
- Hill, P., 1999. Tangibles, intangibles and services: A new taxonomy for the classification of output. *Canadian Journal of Economics*, 32 (2), 426-46.
- Liao, Z., Cheung, M.T., 2001. Internet-based e-shopping and consumer attitudes: an empirical study. *Information & Management*, 38 (5), 299-306.
- Lin, Y., Wang, Y., Yu, C., 2010. Investigating the drivers of the innovation in channel integration and supply chain performance: A strategy orientated perspective. *International Journal of Production Economics*, 127 (2), 320-32.
- Lovelock, C.H., Wirtz, J., 2004 (fifth ed.). *Services Marketing: People, Technology, Strategy*. New Jersey: Pearson/Prentice Hall.
- Lovelock, C.H., 1983. Classifying services to gain strategic marketing insights. *The Journal of Marketing*, 47 (3), 9-20.
- Lusch, R.F., Vargo, S.L., O'Brien, M., 2007. Competing through service: Insights from service-dominant logic. *Journal of Retailing*, 83 (1), 5-18.
- Macintyre, M., Parry, G., Angelis, J., 2011. *Service Design and Delivery*. New York: Springer.
- Marx, K., 2001 (Original work published in 1867). *Capital: A Critique of Political Economy*. New York: Penguin Books in association with New Left Review.
- Matthyssens, P., Vandenbempt, K., 1998. Creating competitive advantage in industrial services. *Journal of Business & Industrial Marketing*, 13 (4), 339-55.
- Matthyssens, P., Vandenbempt, K., 2008. Moving from basic offerings to value-added solutions: Strategies, barriers and alignment. *Industrial Marketing Management*, 37 (3), 316-28.
- Mears, B., 2010. Justices pass on chance to examine illegal music downloads. CNN, November 29, Available: <http://edition.cnn.com/2010/CRIME/11/29/scotus.music.downloads>
- Miller, R.L., 2000. *Economics Today: The Micro View*. Boston: Addison Wesley.
- Neely, A., 2008. Exploring the financial consequences of the servitization of manufacturing. *Operations Management Research*, 1 (2), 103-18.

- Neely, A., 2005. The evolution of performance measurement research. *International Journal of Operations & Production Management*, 25 (12), 1264-77.
- Ng, I., Parry, G., Wilde, P., McFarlane, D., Tasker, P., 2011. *Complex Engineering Service Systems: Concepts and Research*. London: Springer
- Normann, R., Ramírez, R., 1993. From value chain to value constellation: Designing interactive strategy. *Harvard business review*, 71 (4), 65-77.
- Oberholzer-Gee, F., Strumpf, K., 2007. The effect of file sharing on record sales: An empirical analysis. *Journal of Political Economy*, 115 (1), 1-42.
- Ordanini, A., Pasini, P., 2008. Service co-production and value co-creation: The case for a service-oriented architecture (SOA). *European Management Journal*, 26 (5), 289-97.
- Ouellet, J., 2007. The purchase versus illegal download of music by consumers: The influence of consumer response towards the artist and music. *Canadian Journal of Administrative Sciences*, 24 (2), 107-19.
- Parasuraman, A., Zeithaml, V.A., Berry, L.L., 1985. A conceptual model of service quality and its implications for future research. *Journal of Marketing*, 49 (4), 41-50.
- Parry, G., Newnes, L., Huang, X., 2011. Goods, products and services: What do these terms mean? In: Macintyre, M., Parry, G. and Angelis, J., (Eds.). *Service design and delivery*. London: Springer.
- Parvatiyar, A., Sheth, J.N., 2000. The domain and conceptual foundations of relationship marketing. In: Sheth, J.N. and Parvatiyar, A., (Eds.). *Handbook of relationship marketing*. Thousand Oaks, CA.: Sage.
- Payne, A., Storbacka, K., Frow, P., 2008. Managing the co-creation of value. *Journal of the Academy of Marketing Science*, 36 (1), 83-96.
- Peitz, M., Waelbroeck, P., 2006. Why the music industry may gain from free downloading — The role of sampling. *International Journal of Industrial Organization*, 24 (5), 907-13.
- Porter, M., Ketels, C., 2003. *UK competitiveness: Moving to the next stage*. London: Department of Trade and Industry.
- Porter, M.E., 1998. *The Competitive Advantage of Nations: With a New Introduction*. New York: Free Press.
- Prahalad, C.K., Ramaswamy, V., 2000. Co-opting customer competence. *Harvard business review*, 78 (1), 79-87.
- Prahalad, C.K., Ramaswamy, V., 2003. The new frontier of experience innovation. *MIT Sloan Management Review*, 44 (4), 12-18.

Prahalad, C.K., Ramaswamy, V., 2004. Co-creation experiences: The next practice in value creation. *Journal of Interactive Marketing*, 18 (3), 5-14.

PriceWaterhouseCoopers, 2010. Global entertainment and media outlook: 2010–2014. PriceWaterhouseCoopers LLP: Delaware.

Ramirez, R., 1999. Value co-production: Intellectual origins and implications for practice and research. *Strategic Management Journal*, 20 (1), 49-65.

RIAA (Recording Industry Association of America), 2004. RIAA market data: The cost of a CD. Archived copy from the Internet archive, <http://web.archive.org/web/20030416004543/http://www.riaa.com/MD-U.S.-7.cfm>.

Robinson, T., Clarke-Hill, C.M., Clarkson, R., 2002. Differentiation through service: A perspective from the commodity chemicals sector. *The Service Industries Journal*, 22 (3), 149-66.

Robinson, J., 2010. Britons 'downloaded 1.2bn illegal tracks this year', [guardian.co.uk](http://www.guardian.co.uk), Thursday 16 December. Available: <http://www.guardian.co.uk/media/2010/dec/16/illegal-music-downloading-online-piracy>

Sandulli, F.D., 2007. CD music purchase behaviour of P2P users. *Technovation*, 27 (6-7), 325-34.

Satorra, A., Bentler, P.M., 1994. Corrections to test statistics and standard errors in covariance structure analysis. In: Von Eye, A. and Clogg, C.C., (Eds.). *Latent variables analysis: Applications for developmental research*. Thousand Oaks, CA.: Sage.

Schiefer, G., 2002. Environmental control for process improvement and process efficiency in supply chain management — the case of the meat chain. *International Journal of Production Economics*, 78 (2), 197-206.

Schneider, B., Bowen, D.E., 1995. *Winning the Service Game*. Harvard Business School Press.

Smith, A., 1776. *The Wealth of Nations*. Chichester: Wiley.

Smith, R.J., Eroglu, C., 2009. Assessing consumer attitudes toward off-site customer service contact methods. *International Journal of Logistics Management*, 20 (2), 261-77.

System of National Accounts (SNA), 1993. Commission of the European Communities – Eurostat, International Monetary Fund, Organisation for Economic Co-operation and Development, United Nations World Bank: Brussels/Luxembourg, New York, Paris, Washington, DC.

Stuart, E.W., Shimp, T.A., Engle, R.W., 1987. Classical conditioning of consumer attitudes: Four experiments in an advertising context. *Journal of Consumer Research*, 14 (3), 334-49.

Vandermerwe, S., Rada, J., 1988. Servitization of business: Adding value by adding services. *European Management Journal*, 6 (4), 314-24.

Vargo, S.L., Lusch, R.F., 2004. Evolving to a new dominant logic for marketing. *Journal of Marketing*, 68 (1), 1-17.

Vargo, S., Lusch, R.F., 2008. Service-dominant logic: Continuing the evolution. *Journal of the Academy of Marketing Science*, 36 (1), 1-10.

VERDICT, 2010. UK home entertainment retailing 2010: Retail losing out as industry innovates. DMVT0629

Wise, R., Baumgartner, P., 1999. Go downstream: The new profit imperative in manufacturing. *Harvard business review*, 77 (5), 133-41.

Zeithaml, V.A., Bolton, R.N., Deighton, J., Keiningham, T.L., Lemon, K.N., Petersen, J.A., 2006. Forward-looking focus. *Journal of Service Research*, 9 (2), 168-83.

Zhang, X., Chen, R., 2008. Examining the mechanism of the value co-creation with customers. *International Journal of Production Economics*, 116 (2), 242-250.

**TABLE 1**

Items Measuring Music Consumer Attitudes, Music Purchasing and Discovery Methods

<p><b><i>Music Consumer Attitudes</i></b></p> <p><i>Explorative Consumer</i></p> <p>EXP1.- I like to be at the cutting edge of new music / know about music and products before other people</p> <p>EXP2.- I actively enjoy searching for and discovering music that is new to me</p> <p>EXP3.- I like to have music recommended to me</p> <p>EXP4.- I find it easy to find new music</p> <p>EXP5.- I like receiving music I don't know as a gift</p> <p>EXP6.- I am constantly interested in and looking for more music</p> <p><i>Early adopter</i></p> <p>EAR1.- My music collection is a source of pride</p> <p>EAR2.- I like to fill my new music device with loads of music right away</p> <p>EAR3.- The music I like makes me stand out in a crowd</p> <p>EAR4.- My music tastes are part of my look &amp; image</p> <p>EAR5.- People often ask my advice on music - what to listen, where to buy it etc.</p> <p>EAR6.- The venue I choose for a night out depends on what music they are playing</p> <p>EAR7.- I get frustrated when I can't find the music that I want to listen to / buy</p> <p><i>DROP1.- I love technology, and music is a big part of that technology</i></p> <p><i>DROP2.- I like to talk about music</i></p> <p><i>Cautious Consumer</i></p> <p>CAU1.- A lack of money is the main reason I don't buy music</p> <p>CAU2.- I'd buy more music if I could listen to it first</p> <p>CAU3.- I'd buy more music if I could take it back if I didn't like it</p> <p><i>Band Fan</i></p> <p>BAN1.- I'd like my favourite band to contact me in order to test new material ahead of its release</p> <p>BAN2.- When I go to a concert, I'd like to be able to buy a CD of the concert as I leave</p> <p>BAN3.- When I go to a concert, I'd like to be able to download a digital recording of the concert when I got home</p> <p>BAN4.- I would be interested in a range of exclusive ways to really interact with my favourite bands e.g. exclusive gigs, after-party, meet the band, appear in the video, remix their music for commercial release, watch the band record etc.</p> <p><i>DROP3.- When I go to a concert, I'd like to be able to have a CD of the concert sent to my home after it finishes</i></p> <p><b><i>Purchasing Behaviours</i></b></p> <p><i>Product Owners</i></p> <p>PRO1.- A device that comes pre-loaded with music</p> <p>PRO2.- A kiosk style vending machines</p> <p>PRO3.- Mail order music club</p>
---

*Service Pay as You Go*

- SGO1.- Pre-payment, top-up cards, like Oyster
- SGO2.- Online payment e.g. Paypal
- SGO3.- Subscription download services where you download and own the music
- SGO4.- Free, but with advertising messages linked to the music you're listening to

*Service Pay Monthly*

- MON1.- Itemised billing of your music purchases as part of your mobile bill
- MON2.- An all-inclusive music package within your monthly subscription for your mobile service
- MON3.- Itemised billing of your music purchases as part of your home entertainment/ broadband bill e.g. cable, SKY
- MON4.- An all-inclusive music package within your monthly subscription for your home entertainment/ broadband services e.g. cable, SKY

***Music Discovery Methods***

*Passive Consumer*

- PAS1.- Regular emails with personalised new music recommendations based on music you already like
- PAS2.- Recommendation cards inside CDs showing other music similar to that, which you just bought
- PAS3.- Using a website which recommends new music based on other music you own
- PAS4.- Top 10 lists - a website listing 'must buy' albums by genre [Jazz, Blues, Rock etc]
- PAS5.- A free little gadget that sits by your stereo, listens to the music you are playing at home
- PAS6.- Gift recommendation website, where you can type in the music you know your friend or relative likes and it will recommend new music for you to buy as a gift
- PAS7.- A search engine, like Google, that allows you to search for music you like and it immediately recommends other music you might like
- PAS8.- A music trial service, which allows you to receive music CDs in the post to listen to. You only pay for the CDs you decide to keep, the others you send back
- PAS9.- A free magazine posted to you that recommends new music based on your music collection and your music taste
- PAS10.- A free download of three songs that is available with any music you buy. The songs will be similar to what you have bought, and will allow you to listen to them for a week for free
- DROP4.- A free little computer program that listens to the music you are playing on your home computer and recommends new music to you*

*Active Costumer*

- ACT1.- An 0800 phone line through to a music expert who can give you the latest information on what's new and what music you might like, based on music you already like
- ACT2.- New music alerts on social networking sites, such as Facebook, based on music your friends are listening to
- ACT3.- A free little application on your mobile that listens to the music you are playing and recommends new music to you

## Draft Document

ACT4.- Music gift recommendation alerts on social networking sites, such as Facebook, sent to you based on your friends' and relatives' birthdays

ACT5.- »Fill my mp3 player» - a service that downloads music recommended for you, for a fee, based on what's currently on your mp3 player library and playlists

*DROP5.- A music expert you can contact over the internet who can give you the latest information on what's new and what music you might like, based on music you already like*

*\*Dropped items in cursive*

Source: Developed by the authors



Standardized factor loadings, explained variance and degree of significance of the parameters for the measurement model

INDICATORS FOR THE VARIABLE "MUSIC CONSUMER ATTITUDES"					
ITEM	St.Factor Loading (t)	Reliability (R <sup>2</sup> )	ITEM	St.Factor Loading (t)	Reliability (R <sup>2</sup> )
EXP1	0.845 (122.128)	0.714	EXP4	0.726 (118.921)	0.527
EXP2	0.903 (133.345)	0.815	EXP5	0.627 (146.376)	0.393
EXP3	0.655 (127.331)	0.429	EXP6	0.781 (126.126)	0.776
EAR1	0.647 (37.182)	0.418	CAU1	0.641 (61.394)	0.411
EAR2	0.678 (38.604)	0.460	CAU2	0.875 (63.211)	0.766
EAR3	0.688 (41.440)	0.473	CAU3	0.801 (63.141)	0.642
EAR4	0.688 (39.961)	0.473	BAN1	0.783 (59.554)	0.613
EAR5	0.750 (42.055)	0.562	BAN2	0.646 (53.833)	0.563
EAR6	0.685 (37.935)	0.469	BAN3	0.712 (54.022)	0.507
EAR7	0.716 (37.480)	0.513	BAN4	0.802 (63.218)	0.643

**Composite Reliability 0.936**

**Variance Extracted 0.513**

INDICATORS FOR THE VARIABLE "MUSIC PURCHASING"					
SGO1	0.757 (88.690)	0.573	MON1	0.841 (81.789)	0.527
SGO2	0.806 (80.511)	0.650	MON2	0.855 (86.030)	0.557
SGO3	0.749 (83.453)	0.561	MON3	0.866 (21.666)	0.496
SGO4	0.765 (88.626)	0.547	MON4	0.824 (22.998)	0.671
PRO1	0.750 (78.778)	0.563	PRO2	0.711 (22.635)	0.505
PRO3	0.817 (81.169)	0.667			

**Composite Reliability 0.813**

**Variance Extracted 0.522**

INDICATORS FOR THE VARIABLE "DISCOVERY METHODS"					
PAS1	0.781 (88.690)	0.610	PAS9	0.726(81.789)	0.527
PAS2	0.701 (80.511)	0.491	PAS10	0.746 (86.030)	0.557
PAS3	0.803 (83.453)	0.645	ACT1	0.704 (21.666)	0.496
PAS4	0.697 (88.626)	0.486	ACT2	0.819 (22.998)	0.671
PAS5	0.714 (78.778)	0.510	ACT3	0.774 (22.635)	0.599
PAS6	0.735 (81.169)	0.540	ACT4	0.847 (22.932)	0.717
PAS7	0.733 (74.613)	0.537	ACT5	0.757 (22.255)	0.573

PAS8	0.681 (72.405)	0.464			
<b>Composite Reliability 0.918</b>					
<b>Variance Extracted 0.528</b>					

**TABLE 3**

Indicators of the goodness of fit of the different constructs and of the model of relationships

<i>TYPE OF FIT</i>	<i>INDICATOR</i>	<i>NOMEN</i>	<i>ACCEPTANCE RANGE</i>	<i>MUSIC CONSUM</i>	<i>MUSIC PURCHA</i>	<i>DISCOV METHOD</i>	<i>MODEL1</i>	<i>MODEL2</i>
<b>ABSOLUTE</b>	Chi-Square Likelihood	CMIN	Offers significant test	266.732 (p = 0.123)	847.927 (p = 0.217)	6109.054 (p = 0.182)	9302.388 (p=0.152)	6415.2919 (p = 0.263)
	Goodness-of-Fit Index	GFI	> 0.900	0.975	0.938	0.905	0.925	0.936
	Root Mean Square Error	RMSEA	0.050-0.080	0.075	0.079	0.073	0.056	0.065
	Root Mean Residual	RMR	< 0.050	0.030	0.028	0.042	0.030	0.017
<b>INCREMENTAL</b>	Compared Fit Index	CFI	> 0.900	0.983	0.963	0.911	0.911	0.921
	Normed Fit Index	NFI	> 0.900	0.982	0.962	0.909	0.906	0.917
	Tucker-Lewis Index	NNFI	> 0.900	0.971	0.951	0.900	0.901	0.910
	Adjusted Goodness Fit	AGFI	> 0.900	0.941	0.925	0.901	0.914	0.922
<b>PARSIMONY</b>	Normed Chi-square	CMINDF	Range (1-5)	1.686	3.475	2.024	2.769	1.869

**LEGEND** MUSIC CONSUM: Music Consumer Attitudes

MUSIC PURCHA: Music Purchasing Behaviours

DISCOV METHOD: Music Discovery Methods

NOMEN: Indicators Nomenclature

INCREMENTAL: Incremental Fit

Acceptance/Rejection of hypothesis

STRUCTURAL MODEL MUSIC CONSUMER ATTITUDES TO PURCHASING METHODS			COEFFICIENT	ACCEPT / REJECT
MUSIC CONSUMER ATTITUDES	EXP. CONSUMER	PRODUCT	0.558 ***	H1a: Accepted
	EARLY ADOPTERS		0.298***	
	CAU. CONSUMER		0.011**	
	BAND FAN		0.325***	
MUSIC CONSUMER ATTITUDES	EXP. CONSUMER	SERVICE PAY AS YOU GO	0.533***	H1b: Accepted
	EARLY ADOPTERS		0.236***	
	CAU. CONSUMER		0.042 **	
	BAND FAN		0.351 ***	
MUSIC CONSUMER ATTITUDES	EXP. CONSUMER	SERVICE PAY MONTHLY	0.512 ***	H1c: Accepted
	EARLY ADOPTERS		0.382 ***	
	CAU. CONSUMER		-0.023 **	
	BAND FAN		0.282 ***	
STRUCTURAL MODEL MUSIC CONSUMER ATTITUDES TO PURCHASING METHODS			COEFFICIENT	ACCEPT / REJECT
MUSIC CONSUMER ATTITUDES	EXP. CONSUMER	PUSH METHODS	0.469 ***	H2a: Accepted
	EARLY ADOPTERS		0.020 **	
	CAU. CONSUMER		0.185 ***	
	BAND FAN		0.366 ***	
MUSIC CONSUMER ATTITUDES	EXP. CONSUMER	VALUE CO-PRODUCTION	0.392 ***	H2b: Accepted
	EARLY ADOPTERS		0.176 ***	
	CAU. CONSUMER		-0.062 ***	
	BAND FAN		0.356 ***	

Significance Level: \*\*\* p<0.01; \*\* p<0.05

**TABLE 5**

Moderating Effect of Age in Purchasing Behaviour

Group							
<i>Under 25</i>	Parameter Product	R <sup>2</sup>	Parameter Service Pay as you Go	R <sup>2</sup>	Parameter Service Pay Monthly	R <sup>2</sup>	Chi-Squared Test

Explorative Consumer	0.461		0.544		0.475		
Early Adopter	0.223	0.430	0.283	0.586	0.283	0.436	977.761
Cautious Consumer	0.032		0.051		0.041		
Band Fan	0.310		0.311		0.207		
<i>From 25 to 40</i>	Parameter	R <sup>2</sup>	Parameter	R <sup>2</sup>	Parameter	R <sup>2</sup>	Chi-Squared Test
Explorative Consumer	0.501		0.582		0.491		
Early Adopter	0.256	0.501	0.285	0.640	0.292	0.475	1370,703
Cautious Consumer	-0.022		0.073		0.020		
Band Fan	0.327		0.268		0.218		
<i>From 40 to 55</i>	Parameter	R <sup>2</sup>	Parameter	R <sup>2</sup>	Parameter	R <sup>2</sup>	Chi-Squared Test
Explorative Consumer	0.435		0.542		0.384		
Early Adopter	0.183	0.375	0.204	0.487	0.192	0.353	1460.103
Cautious Consumer	0.121		0.173		0.051		
Band Fan	0.260		0.321		0.230		
<i>More than 55</i>	Parameter	R <sup>2</sup>	Parameter	R <sup>2</sup>	Parameter	R <sup>2</sup>	Chi-Squared Test
Explorative Consumer	0.528		0.543		0.371		
Early Adopter	0.267	0.543	0.152	0.554	0.159	0.342	2052.980
Cautious Consumer	0.037		0.075		-0.024		
Band Fan	0.232		0.317		0.253		

Moderating Effect of Age in Discovering Methods

Group						
<i>Under 25</i>	Parameter Push Methods	R <sup>2</sup>	Parameter Value Co-Production	R <sup>2</sup>	Chi-Squared Test	

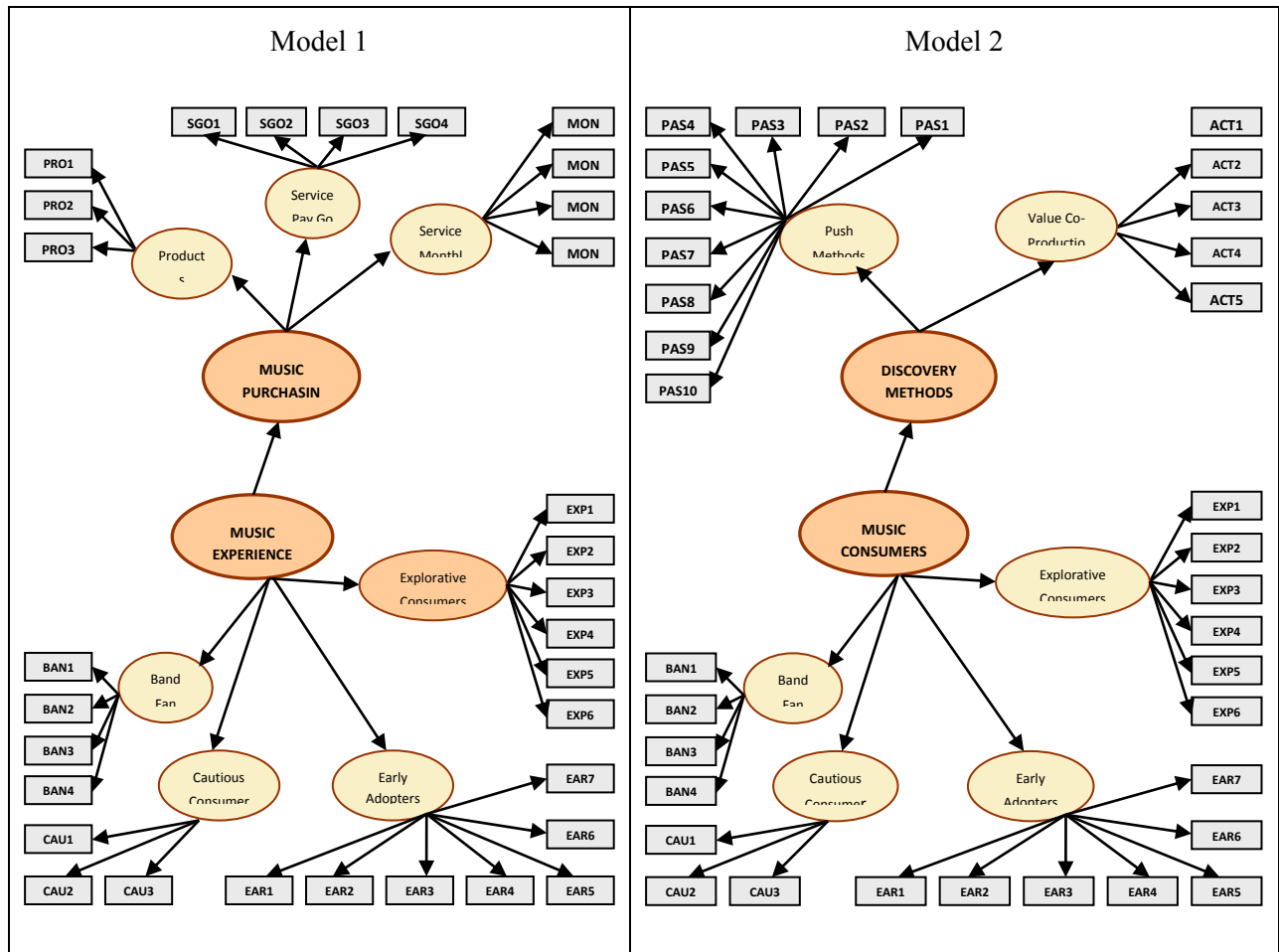
Explorative Consumer	0.499		0.472		
Early Adopter	-0.036	0.413	-0.021	0.333	2731.501
Cautious Consumer	0.144		0.061		
Band Fan	0.373		0.326		
<i>From 25 to 40</i>	Parameter	R2	Parameter	R2	Chi-Squared Test
Explorative Consumer	0.478		0.429		
Early Adopter	0.045	0.412	0.086	0.349	4018.116
Cautious Consumer	0.147		0.007		
Band Fan	0.400		0.397		
<i>From 40 to 55</i>	Parameter	R <sup>2</sup>	Parameter	R <sup>2</sup>	Chi-Squared Test
Explorative Consumer	0.474		0.303		
Early Adopter	0.053	0.430	0.131	0.268	3930.853
Cautious Consumer	0.217		0.092		
Band Fan	0.394		0.388		
<i>More than 55</i>	Parameter	R <sup>2</sup>	Parameter	R <sup>2</sup>	Chi-Squared Test
Explorative Consumer	0.525		0.395		
Early Adopter	0.037	0.440	0.047	0.307	4760.761
Cautious Consumer	0.228		0.043		
Band Fan	0.334		0.383		

Group							
<i>Till 1 Hour</i>	Parameter Product	R <sup>2</sup>	Parameter Service Pay as you Go	R <sup>2</sup>	Parameter Service Pay Monthly	R <sup>2</sup>	Chi-Squared Test
Explorative Consumer	0.432		0.492		0.383		
Early Adopter	0.125		0.149		0.121		
Cautious Consumer	0.137	0.374	0.127	0.482	0.018	0.349	977.761
Band Fan	0.283		0.314		0.309		
<i>From 1 to 2 Hours</i>	Parameter	R2	Parameter	R2	Parameter	R2	Chi-Squared Test
Explorative Consumer	0.481		0.573		0.487		
Early Adopter	0.076		0.115		0.215		
Cautious Consumer	0.104	0.468	0.176	0.547	0.034	0.461	1370.707
Band Fan	0.407		0.345		0.302		
<i>From 2 to 4 Hours</i>	Parameter	R <sup>2</sup>	Parameter	R <sup>2</sup>	Parameter	R <sup>2</sup>	Chi-Squared Test
Explorative Consumer	0.481		0.569		0.428		
Early Adopter	0.251		0.226		0.227		
Cautious Consumer	-0.054	0.471	-0.015	0.580	-0.023	0.359	1460.109
Band Fan	0.309		0.397		0.241		
<i>More than 4 Hours</i>	Parameter	R <sup>2</sup>	Parameter	R <sup>2</sup>	Parameter	R <sup>2</sup>	Chi-Squared Test
Explorative Consumer	0.516		0.601		0.523		
Early Adopter	0.274		0.278		0.296		
Cautious Consumer	-0.025	0.528	0.037	0.608	-0.014	0.538	2052.907
Band Fan	0.319		0.370		0.273		

Group					
<i>Till 1Hour</i>	Parameter Push Methods	R <sup>2</sup>	Parameter Value Co-Production	R <sup>2</sup>	Chi-Squared Test
Explorative Consumer	0.444		0.375		
Early Adopter	0.044	0.377	0.122	0.263	4902.212
Cautious Consumer	0.253		0.019		
Band Fan	0.337		0.328		
<i>From 1 to 2 Hours</i>	Parameter	R <sup>2</sup>	Parameter	R <sup>2</sup>	Chi-Squared Test
Explorative Consumer	0.446		0.346		
Early Adopter	-0.033	0.476	0.017	0.407	3608.760
Cautious Consumer	0.256		0.075		
Band Fan	0.459		0.530		
<i>From 2 to 4 Hours</i>	Parameter	R <sup>2</sup>	Parameter	R <sup>2</sup>	Chi-Squared Test
Explorative Consumer	0.492		0.455		
Early Adopter	-0.119	0.542	-0.047	0.459	154.130
Cautious Consumer	0.169		0.071		
Band Fan	0.507		0.495		
<i>More than 4 Hours</i>	Parameter	R <sup>2</sup>	Parameter	R <sup>2</sup>	Chi-Squared Test
Explorative Consumer	0.452		0.397		
Early Adopter	0.132	0.382	0.115	0.326	4051.036
Cautious Consumer	0.096		-0.019		
Band Fan	0.389		0.394		

**FIGURE 1**

Models of Relationships between Music Consumer Distinctive Attitudes and Music Purchasing (Model 1) and Music Discovery Methods (Model 2)

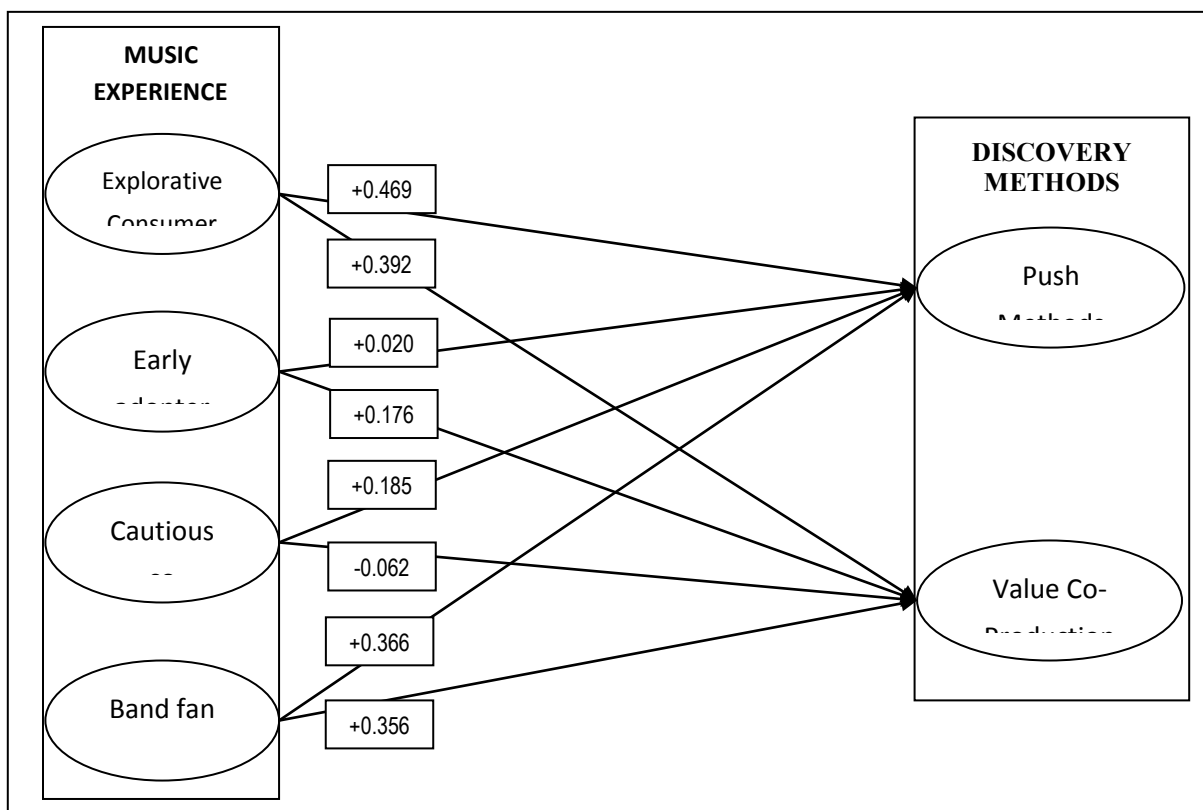
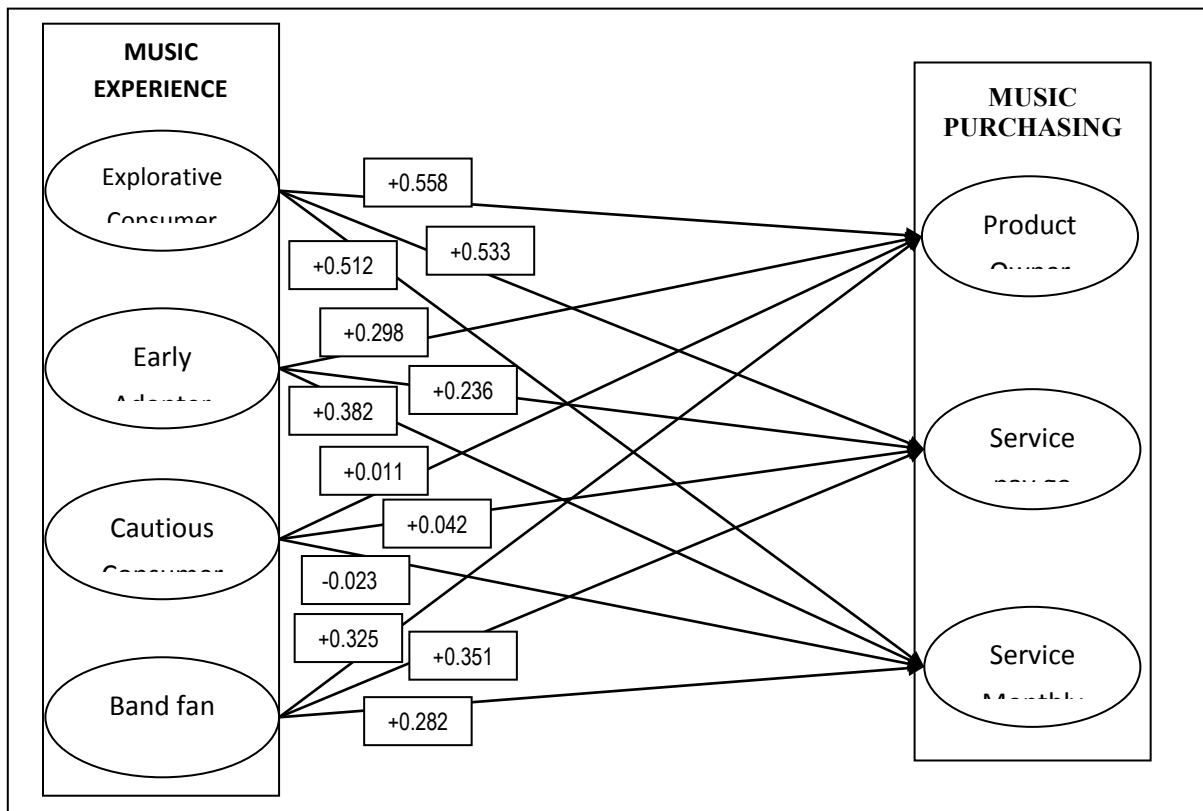


Source: Developed by the authors



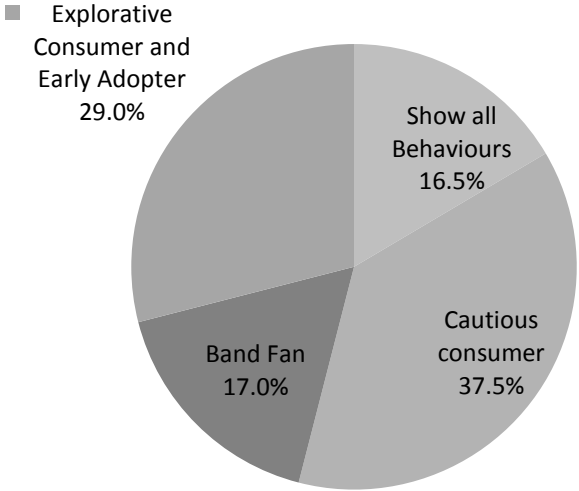
FIGURE 2

Analysis of the relationship between Music Experience, Music Purchasing and Discovery Methods



**FIGURE 3**

Graph Showing the Behavioural Characteristics Exhibited by Consumers



Source: Developed by the authors

