Collectors' Buying Behavior: A Model Based On Attitudes and Market Heterogeneity

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Abstract

The purpose of this study is to analyze the behavioral aspects of collecting behavior. Following a review of the literature on collecting and related areas, the study examines two alternative theoretical models of collectors' behavior: (i) the 'Theory of Planned Behavior' and its more recent modifications; and (ii) the 'Theory of Strength-Related Properties of. Utilizing both models the study identifies several market segments of collectors—each with distinctive purchasing behaviors—among a sample of the population of Spain. The study also determines the number of collectors in Spain and the most appropriate behavioral model for describing their activities. The implications of the results for marketing strategies within each segment of the collectibles market are examined in detail.

Keywords: Attitude, collector, consumer behavior, heterogeneity, prediction

1. Introduction

Collecting has been a common practice in all societies throughout history, including contemporary Western societies. This activity has become so popular that approximately one-third of the population of the United States and the United Kingdom consider themselves to be collectors for whom collecting is a significant activity in their lives (Belk, 1995). This behavior, which has given rise to a vibrant global consumer market in collectibles, has been studied from the perspective of a wide range of disciplines including history, cultural heritage, museum management, and financial investment.

However, despite the popularity of the activity and the vibrancy of the collectibles market, there is a relative scarcity of scientific research on the phenomenon of collecting from an economic perspective. Belk (1995) studied the collecting behavior and the socio-demographic segmentation. Pearce (1994) examined collector identification and segmentation. Chen (2009) analyzed the influence of values on art collectors and exhibit visitors.

The present study seeks to clarify several issues about consumer behavior in this burgeoning sector. In particular, the study adopts the view that although it is difficult to predict how much a collector will be willing to pay for a collectible asset, it should be possible to elucidate the motivations for doing so. However, to understand the behavior of collectors it is necessary to utilize the most appropriate theoretical model of both the psychological and economic aspects of collecting behavior.

Some studies (Ajzen & Driver, 1991) has been shown to be a mediating factor for behavioral intention in various leisure activities of a similar nature to collecting, theoretical approaches that originate in social psychology are likely to be fruitful in explaining the attitudes and behavioral intentions of this distinctive sector of consumers. The present study therefore examines the applicability of the 'Theory of Planned Behavior' (TPB) (Ajzen, 1991) and the subsequent modifications to this model introduced by Smith et al. (2008).

In addition, the study considers an alternative psycho-social model based on the 'Theory of Strength-Related Properties of Attitudes' (TSPA) (Petty & Krosnick, 1995). Against this background, the main objectives of this study are: (i) to define a theoretical model that can explain the collecting behavior; and (ii) to analyze the effect of market heterogeneity on the behavior. The remainder of the paper is organized as follows. The next section provides the theoretical framework for the study by presenting an overview of the collectibles market, a review of the relevant literature on the collecting phenomenon, and an analysis of proposed models and hypotheses of collecting behavior. The study then describes the methodology of the empirical study of Spanish collectors. The results of the empirical study are then presented. The final section of the paper presents the main conclusions and implications of the study, including suggestions for future avenues of research.

2. Theoretical framework

There are no universally agreed definitions of the terms 'collecting' and 'collectible asset' (Belk, 1995; Carey, 2008; Chen, 2009; Coca, 2001). However, for the purposes of the present study, a 'collectible asset' will be considered an object that an individual gathers according to a set of procedures that guide its search, acquisition, and maintenance. This object must belong to an ordered and limited group of assets, among which the most common are paintings, antiquities and coins. However, it is acknowledged that almost any asset can become a part of a collection.

2.1 Attitude-based theories of behavior

One of the first attitude-based models of human behavior was the 'Theory of Reasoned Action' (TRA) (Fishbein & Ajzen, 1975), which was innovative in analysing attitude in terms of behavior, rather than analyzing attitude in terms of objects. According to the TRA, behavior is determined by behavioral intention, which, in turn, depends on two factors: (i) attitude towards the behavior; and (ii) collective subjective norms.

Ajzen (1991) subsequently sought to improve upon certain limitations in the TRA by developing the 'Theory of Planned Behavior' (TPB). In particular, the TPB took into account the existence of behaviors that are not entirely volitional by introducing a new predictor—perceived behavioral control—which referred to the resources and opportunities that are available to an individual that make it easier (or more difficult) to perform the intended behavior. The TPB has been successfully applied to explain behaviors that have some similarities to collecting. These include: (i) leisure or free-time activities; (ii) sports; and (iii) the development of social networks (Ajzen & Driver, 1991; Rhodes et al., 2002).

More recently, Smith et al. (2008) included new variables in the TPB model with a view to increasing its capacity to explain and predict behavior. These authors considered that the 'subjective norms' of the TPB were poorly defined and thus lacked predictive power. As a consequence, they subdivided 'subjective norms' into: (i) 'descriptive norms' (what *is*); and (ii) 'injunctive norms; (what *should be*). They also argued for the inclusion of 'self-identity' in the model (Armitage & Conner, 2001; Cook et al., 2002).

Another model in which attitudes are posited as an antecedent of behavioral intention is the 'Theory of Strength-Related Properties of Attitudes' (TSPA) (Petty & Krosnick, 1995). This model essentially represents an elaboration on the TPB, which has always allowed for the inclusion of new variables to improve behavior prediction (Ajzen, 1991). Indeed, numerous experimental applications (Eagly & Chaiken, 1993; Norman & Smith, 1995; among others) have introduced new variables to the TPB with a view to overcoming its perceived limitations with regard to complex behaviors that have long-term or irregular intentions (Fishbein & Ajzen, 2005). These behaviors usually involve elaborate sequences of coordinated actions that occur over a stretch of time or with an irregular frequency. In such behaviors, which have certain characteristics consistent with collecting behavior, attitudes have been shown to play a protagonist role in the prediction of behavioral intention (Petty & Krosnick, 1995).
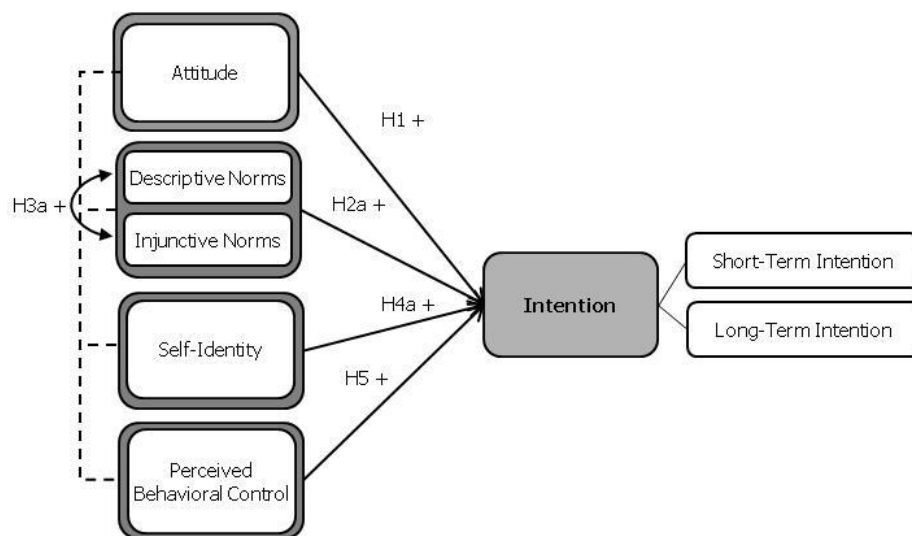
The TSPA model emphasizes the importance of attitudes and distinguishes within them a 'subjective norm' construct (related to social acceptance) and a 'social identity' construct (related to the acceptance of oneself). These two components determine individual positive or negative attitudes and are therefore best considered as antecedents of attitude (Petty & Krosnick, 1995). Therefore, the TSPA model has a different structure from that of the TPB model.

The TSPA holds that subjective norms and personal identity determine attitudes which, along with perceived behavioral control, determine behavioral intention. This structure explains certain situations in which attitude is a first-order determinant of intention, or other specific behaviors in which the lack of positive attitude leads to an absence of behavioral intention.

In the specific context of collecting behavior, it is also necessary to consider the heterogeneity of demand for collectible assets. This heterogeneity is a consequence of the wide variety of collectible goods and collectors, who have diverse purchasing motives and different socio-demographic, socio-economic, and behavioral profiles. Awareness of the differences that exist among consumers has stimulated the development of differentiated marketing strategies to satisfy particular demand segments (Wedel & Kamakura, 2000).
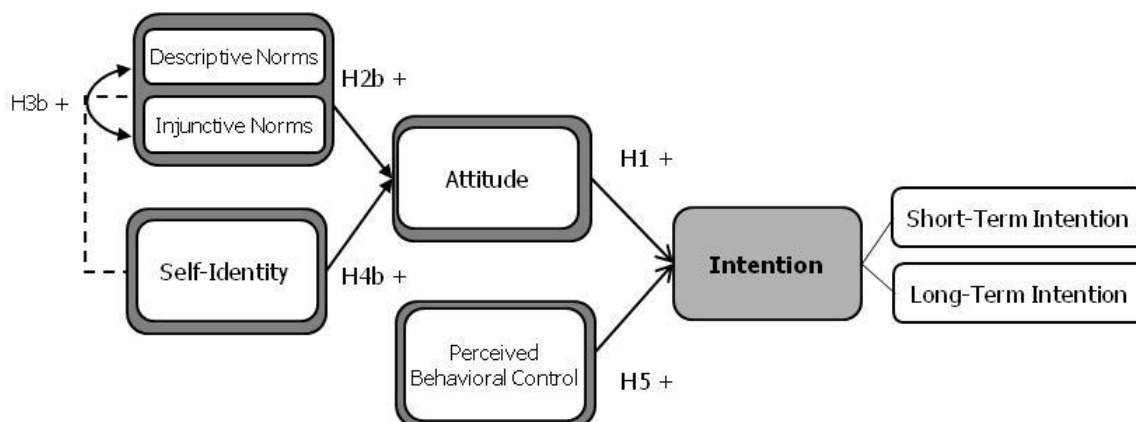
In consequence, both the TPB and the TSPA identify the same constructs as antecedents for behavioral intention, but differ in their structure. The general structure of each model is shown in Figure 1 (TPB-based model) and Figure 2 (TSPA-based model). The constructs in these models are discussed in more detail below.

Figure 1. TPB-based model with modifications

Source: Ajzen, 1991; Smith et al., 2008.

Figure 2. TSPA-based model

Source: Ajzen, 1991; Petty & Krosnick, 1995; Smith et al., 2008.

2.2 Attitudes towards collectible asset purchase

Attitude towards behavior is a personal factor that describes a positive or negative predisposition towards a behavior.

Individuals learn which behaviors have positive or negative consequences, and this determines their favorable or unfavorable attitudes. Attitude is an affective state by means of which individuals express their evaluation of specific characteristics in the collected object or in the collecting process itself. This evaluation originates from the individual's needs and wants, resulting in a predisposition or aversion towards collecting.

According to the literature (Belk, 1995; Muensterberger, 1994), most collectors start out with generic collections and specialize as their knowledge develops. Collectors elaborate their collection by spending a great deal of their free time and income on this activity, adding objects to their collections according to specific reasons and concepts. Some of the objectives for starting a collection are the pleasure or excitement of consumerism, to obtain or enrich values, to become a part of a social group, to occupy leisure time, and to improve knowledge of the collectible asset market and one's own collection.

Collectors' attitudes that favor purchase intention are self-realization, reinforcement of personality, self-image, and security (Muensterberger, 1994). Moreover, attitudes project the collector's values upon the collectible objects. Collectors do not simply acquire goods; rather, the search and collection-maintenance process is intense, which makes these goods highly valued by collectors.

Attitudes are included in both models because they are assumed to be the most important determinants of behavioral intention. According to the TPB model, attitudes can modify intention directly, along with subjective norms, perceived behavioral control, and self-identity. Whereas, according to the TSPA model, attitudes can modify intention directly, along with perceived behavioral control, with subjective norms and self-identity being antecedents for attitude.

- *Hypothesis 1: There is a positive relationship between favorable attitudes towards collecting and intention to purchase collectibles.*

2.3 Subjective norms regarding collecting

The second direct determinant of behavioral intention in both models is the construct of 'subjective norms'. These are individual perceptions of social influence with regard to a specific behavior. Based on normative beliefs, subjective norms are a function of the perceived expectations of role figures, family members, friends, or companions, who might approve or disapprove of the behavior and the motivation to perform it (Ajzen, 1991).

In the TPB model, subjective norms can be considered as antecedents of intention on the same level with attitudes and perceived behavioral control. In contrast, in the TSPA they are posited as antecedents of attitude; as such, they exert an indirect influence on intention.

According to the literature (Belk, 1995; Pearce, 1994), the collection-formation process is usually an individual activity. Nevertheless, collecting also has social aspects, which are largely related to its competitive character. Although such competition can be against oneself, it can also be directed against other collectors—because collectors typically value their collections by comparing them with other collections and the opinions of other collectors.

The relationship between collecting activities and subjective norms has been identified by a number of authors. Belk (1995) acknowledged the social benefits (recognition or status) that are derived from collecting. Formanek (1991) pointed out that other people can be one of the motivations for collecting. Pearce (1994) contended that the relatively limited social sphere of collecting particular objects can lead to a very competitive environment among collectors within that sphere. McIntosh & Schmeichel (2004) also observed that cultural and economic activities, such as collecting, are generally well regarded by society at large. However, Long & Schiffman (1997) offered a different view in arguing that feelings of respect and self-realisation are sometimes tempered by a fear among collectors that non-collectors might consider this activity as infantile or a waste of time and/or money.

- *Hypothesis 2a: There is a positive relationship between the intensity of subjective norms (descriptive and injunctive) and intention to purchase collectibles.*
- *Hypothesis 2b: There is a positive relationship between the intensity of subjective norms (descriptive and injunctive) and positive attitudes towards the purchase of collectibles.*

Finally, in view of the claim that poorly defined social norms have little predictive value (Smith et al., 2008) the two types of subjective norms (injunctive and descriptive) are considered separately.

- *Hypothesis 3a: The influence of injunctive norms on purchase intention is different from, and independent of, the influence of descriptive norms on purchase intention.*
- *Hypothesis 3b: The influence of injunctive norms on attitudes towards the purchase of collectibles is different from, and independent of, the influence of descriptive norms on attitudes towards the purchase of collectibles.*

2.4 Perceived behavioral control

Personal resources and skills play a significant role in determining whether an individual becomes involved in collecting in general and/or acquiring specific objects in particular. For some types of collectibles, it is necessary to have a certain level of income and experience. These sorts of socio-economic variables, which represent the resources available to the individual collector, are included in the behavioral models under 'perceived behavioral control'. Apart from income and education, such factors as age or family structure might play a part in behavioral control. Persons who have the necessary resources are more likely to perceive a greater degree of behavioral control over collecting activities.

- *Hypothesis 4: There is a positive relationship between perceived behavioral control over collecting and intention to purchase collectibles.*

2.5 Collector's self-identity

Consumer behavior reflects the symbolic meaning that people attach to their (often idealized) personal values and self-identity (Wright et al., 1992; Dibley & Baker, 2001). The collecting behavior has been referred to as 'symbolic purchase' (Belk, 1995; Elliot & Desirve, 1994). According to this interpretation, object acquisition and consumption is driven not only by functional and utilitarian motives, but also by considerations of social status and self-perception.

According to the literature, self-identity is one of the reasons that motivate people to collect. For example, Formanek (1991) contended that, in addition to such overt motivations as historical preservation and financial investment, one of the basic motivations for collecting is a sense of self. In a similar vein, Pearce (1994) noted that a collection of objects is an extension of the self, a symbol of personal goals, abilities, and skills, and a socially differentiating characteristic of a particular individual. Muensterberger (1994) also stressed the personal relationship that exists between the collector and his or her collection. According to this author, the collection is seen as a reflection of self, which provides feelings of security, success, comfort, and tranquility. Belk (1995) agreed that the collection is an extension of the self, which helps to build the individual's world and create a sense of identity.

It would thus seem that self-identity is a relevant variable for inclusion in a model that purports to describe the purchase of collectible assets. However, it is unclear whether it should be posited as: (i) an antecedent of behavioral intention; or (ii) an antecedent of purchase attitudes. The first alternative is in accordance with the modifications of the TPB in the sociological and psychological literature (Cook et al., 2002). The second alternative would be in accordance with the TSPA model, in which personal identity is an antecedent of attitudes; indeed, studies in social psychology have demonstrated that self-identity is a component of attitudes that cannot be included at the same level as the other TPB variables (Eagly & Chaiken, 1993).

- *Hypothesis 5a: Self-identity positively influences intention to purchase collectibles.*
- *Hypothesis 5b: Self-identity positively influences attitudes towards the purchase of collectibles.*

2.6 Moderating behavioral determinants: market heterogeneity

Increasing heterogeneity in consumption patterns and the increasing competitiveness of consumer markets has increased the importance of market segmentation and the customization of offers to meet the preferences of particular target publics. Market heterogeneity in collectibles has been analyzed in various ways.

In terms of *socio-demographic* variables, gender and age appear to be significant determinants of collecting activities (Belk, 1991; Coca, 2001; Danet & Katriel, 1989; Formanek, 1991; Pearce, 1994). In terms of gender, collecting tends to be more common among men; whereas, in terms of age, it is more common among children and seniors, who have more leisure time to engage in collecting activities. Other variables of significance are family size and structure; in particular, a tradition of collecting in the family and a larger family unit positively affects collecting (Pearce, 1994).

In terms of *socioeconomic variables*, income level and employment status modify collecting intentions. Educational level is also related to collecting historical and artistic items, especially with regard to larger collection sizes (Belk, 1995).

Market heterogeneity can also be understood in terms of *behavioral variables*. A desire for an economic benefit in terms of return on investment or (alternatively) a benefit in terms of personal enjoyment can play a role in determining the preferred type of collectible (Coca, 2001). Other studies have analyzed the market in terms of user categories—non-collectors, passive-collectors, and current collectors—in an attempt to discern reasons for people taking up or abandoning this leisure activity (Dishman & Buckworth, 1996).

Finally, there is a distinction in the literature between: (i) 'high' and 'middle' collecting, which is characterized by rare and antique collectibles associated with long-term appreciation (Coca, 2001; Prado at al., 2012); and (ii) 'low' collecting, which is characterized by commonplace items of more modest price.

- *Hypothesis 6: The relationship between the intention to purchase collectibles and its antecedents is influenced by the socio-demographic segment to which the collector belongs.*
- *Hypothesis 7: The relationship between the intention to purchase collectibles and its antecedents is influenced by the socio-economic segment to which the collector belongs.*
- *Hypothesis 8: The relationship between the intention to purchase collectibles and its antecedents is influenced by the behavioral segment to which the collector belongs.*
- *Hypothesis 9: The relationship between the intention to purchase collectibles and its antecedents is influenced by the product segment to which the collector belongs.*

3. Methodology of empirical study

3.1 Sample and data collection

An empirical study was conducted in Spain by telephone survey to test the hypotheses proposed above. Table 1 summarizes the technical specifications of the study.

Table 1. Technical information for the survey

Sample unit	Spanish population (collectors and non-collectors) over 18 years old
Data collection method	Telephone survey
Sampling error	Total sample: 1.99%; Collector sample: 4.38%
Confidence level	95%; Z = 2; P = Q = 0.50
Sampling method	Probability
Number of interviews	2,435 interviews
Information collection period	From November 1, 2008 to January 31, 2009

The whole population of Spain was adopted as the population from which the sample for the study was drawn. There were two reasons for this decision. First, it was noted that no previous studies have established the total number of collectors in Spain. It was therefore decided to include the entire Spanish population as the population for the present study with a view to: (i) ascertaining the number of collectors in the country; and (ii) analyzing variations in behavior in terms of socio-demographic and socio-economic profiles. Secondly, there is also no general database or directory of collectors in Spain. It was decided not to consult with specific collectors' associations because the sample would have been limited. The study therefore performed 2435 telephone surveys at random from the Spanish telephone directory. It was found that 501 respondents were collectors or inactive-collectors, thus revealing that 13.2% of the Spanish population identify themselves as collectors and 7.4% identify themselves as inactive collectors (they can collect in the future).

3.2 Measurement scales

To measure the latent variables in the models, the study adapted measurement scales that had already been used in other empirical studies based on TPB or TSPA. Some of these were based on adaptations from other areas related to collecting (Ajzen & Driver, 1991; Daigle et al., 2002; Hrubes et al., 2001), whereas others were scales previously used in the implementation of theoretical models (Ajzen, 1991; Smith et al., 2008). Table 2 summarizes the items used to measure the variables in the present study. All scales used in the survey were 5-point Likert-type scales, which have been recommended for measuring attitudes in a telephone survey of this kind (Krirg, 1999).

Table 2. Measurement of the variables in the analysis

Variable	Item	Content Description	Mean	Std.Dv.
Short-Term	INT1	I will buy an item for my collection in the next 6 months	4.02	1.21
Intention	INT2	It is probable that I buy a collectible in the next 6 months	3.90	1.29
Long-Term Int.	INT3	I expect to continue collecting in the future	4.02	1.33
Attitude	A2	Collecting helps me fight boredom and forget my daily routine	4.36	.67
	A4	Collecting entertains me, I have fun and take pleasure in it	4.53	.67
	A5	Collecting enriches me culturally	4.33	.78
	A6	I like the idea of collecting something	4.50	.60
Descriptive Norms	NSD1	People that are important to me like the fact that I collect	3.86	1.22
	NSD2	People that are important for me encourage me to collect	3.17	1.35
Injunctive Norms	NSI1	My family and friends consider that I should collect something	1.92	.92
	NSI2	I consider that everybody should collect something	2.15	.91
	NSI3	Collectors should belong to collector's associations	1.81	.92
Self-Identity	ID1	I consider myself as a typical collector	3.55	1.21
	ID2	I identify myself with the objects I collect	3.83	1.29
	ID3	Collecting makes me different	3.64	1.06
Perceived	CCP1	It is easy for me to find objects for my collection	4.20	.97
Behavioral Control	CCP2	I am able to find objects for my collection	4.50	.75
	CCP3	I have free time for collecting	4.45	.73
	CCP4	I have economic resources to buy collectible goods	4.35	.75

3.3 Data analysis

The alternative models were tested by structural equations modeling (SEM) after measurement tools that included more than a single item had been evaluated. Market segmentation according to collecting behavior was performed with a latent cluster analysis (Wedel & Kamakura, 2000). This methodology assumes that all of the dataset cannot be explained with a single distribution of probabilities; rather, it requires a mixture of them. The, the number of clusters in the sample is identified by looking at which alternative displays the smallest Bayesian Information Criteria (BIC). Three software packages were uses to study collecting behavior: SPSS 13, EQS 6.1, and Latent Gold 3.0.

4. Results

4.1 Scale reliability and validity

Following an exploratory factor analysis and a confirmatory factor analysis, non-significant items were removed. Once the adequacy of the structural model for effective testing had been confirmed, two dimensions of the intention variable were introduced: (i) short-term intention (six months); and (ii) long-term intention (more than six months). As a result of these procedures, the goodness-of-fit indicators reached the recommended values. With regard to discriminant validity among the constructs, the confidence interval test confirmed that none of the correlations contained a one; results from average variance extracted (AVE) showed that squared covariances were less than the variance extracted. The application of a restricted model produced a significantly worse fit, confirming the discriminant validity of the model.

4.2 Segment identification

An ANOVA analysis for the variable of purchase intention (of collectibles) showed differences with regard to the following variables: (i) gender ($p=0.00$); (ii) age ($p=0.01$); (iii) employment status ($p=0.04$); (iv) type of user ($p=0.00$); (v) expected benefice ($p=0.00$).

To identify market heterogeneity, the variables that proved significant in the ANOVA analysis were examined with the latent segmentation approach. The optimal number of segments in the market for collectors was found to be four (given that the corresponding estimation for the BIC test was the smallest: 5374.07). Table 3 shows the results.

Table 3. Cluster estimation in the market for collectibles

	Likelihood	**BIC***	**Number of parameters**	**p-value**	**Class.Err.**
1-Cluster	-2757.67	5627.24	18	0.00	0.00
2-Cluster	-2620.17	5439.27	32	0.00	0.04
3-Cluster	-2551.38	5388.73	46	0.56	0.04
4-Cluster	**-2500.54**	**5374.08**	**60**	**1.00**	**0.05**
5-Cluster	-2478.58	5417.18	74	1.00	0.12
*BIC: Bayesian information criteria					

The four clusters were labeled as follows: (i) *Employed collectors:* representing 55.88% of the sample; women and men aged 35–44 years; employed by a third party; spending, on average, 200–600 Euros per year on collecting; (ii) *Home-based Collectors:* representing 18.18% of the sample; women aged 45–65 years; homemakers and unemployed; spending, on average, less than 100 Euros per year on collecting; (iii) *Mature collectors:* representing 15% of the sample ; men and women more than 65 years of age; retirees and pensioners; spending, on average, 100–600 Euros per year on collecting; and (iv) *New collectors:* representing 10.94% of the sample; women and men aged 18–25 years; students; spending, on average, less than 100 Euros per year on collecting.

The results confirmed that the relationship between the intention to purchase collectibles and its antecedents was influenced by the market segment to which the buyer belongs when classified by: (i) socio-demographic characteristics (Hypothesis 6); (ii) socio-economic characteristics (Hypothesis 7); and (iii) behavioral characteristics (Hypothesis 8). However, the analysis rejected the hypothesis that proposed a moderating influence in terms of the type of collectible (Hypothesis 9).

4.3 Collecting behavior models

The goodness-of-fit indicators for the non-segmented model were then checked for the TPB model and the TSPA model. The results were again slightly less than the minimum guidelines as a consequence of the sample size: (i) TPB model: x^2: 773.77, gl: 551 (p=0.00); NFI: 0.84; NNFI: 0.93; CFI: 0.94; IFI: 0.95; GFI: 0.87; AGFI: 0.82; RMSE: 0.06; (ii) TSPA model: x^2 (gl: 578) = 957.12 (p=0.00); NFI: 0.80; NNFI: 0.89; CFI: 0.91; IFI: 0.91; GFI: 0.85; AGFI: 0.80; RMSEA: 0.07.

The model that better adapts to the studied behavior can be ascertained by comparing the AIC and CAIC indicators, with smaller values indicating better fit (Ullman, 1996). In this case, the CAIC of the TPB model was larger (–3058.24) than the TSPA model (–3214.07), which indicates that the better model to explain collector behavior was the TSPA model.

The next phase of the multi-group analysis involved defining the structural relationships of each cluster's model and identifying significant differences among groups, while verifying that the scales that measured each of the model's constructs were reliable and valid (Table 4)

Table 4. Confirmed hypotheses in the segmented behavioral model

Hypotheses	Structural Relations	Cluster 1		Cluster 2		Cluster 3		Cluster 4	
		Short-term	Long-term	Short-term	Long-term	Short-term	Long-term	Short-term	Long-term
Hypothesis 1	Attitude $\rightarrow$ Intention	*n.s.*	*n.s.*	0.250 (+)	0.292 (+)	*n.s.*	*n.s.*	*n.s.*	0.327 (+)
Hypothesis 2B	Subjective Norms $\rightarrow$ Attitude Injunctive Norms Descriptive Norms	0.181 (+) *n.s.*		*n.s.* *n.s.*		*n.s.* *n.s..*		*n.s.* *n.s.*	
Hypothesis 3B	Injunctive Norms vs. Descriptive Norms $\rightarrow$ Attitude	There are differences		There are differences		There are differences		There are differences	
Hypothesis 5B	Self-Identity $\rightarrow$ Attitude	0.466 (+)		0.418 (+)		0.334 (+)		0.372 (+)	
Hypothesis 4	Behavioral Control $\rightarrow$ Intention	0.156 (+)	*n.s.*	0.199 (+)	*n.s.*	*n.s.*	*n.s.*	0.594 (+)	*n.s.*
Hypothesis 5B	Self-Identity $\rightarrow$ Attitude	0.466 (+)		0.418 (+)		0.334 (+)		0.372 (+)	
N.S. Non-significant relationship									

4.3.1 'Employed collectors'

Analysis of the first cluster, revealed a relationship between self-identity and attitude, with self-identity as a direct antecedent of attitude. This confirmed Hypothesis 5b, according to which self-identity positively influences attitudes towards collectible purchase. Hypothesis 2b was also confirmed by a significant relationship between injunctive norms and attitude. Hypothesis 3b, which proposed that both types of norms are independent constructs and their effect on attitude is different, was also confirmed. The injunctive norms modified attitudes, whereas the descriptive norms were non-significant throughout the whole study.

Attitudes among 'employed collectors' did have a positive influence on long-term purchase intention, but the low percentage of the extracted variance failed to provide sufficient support to confirm Hypothesis 1, which had proposed that there is a positive relationship between favorable attitudes towards collecting and purchase intention of collectibles. This result probably reflects the intermittent nature of collecting, which is characterized by high drop-out rates.

Finally, perceived behavioral control had a positive influence on short-term purchase intentions in the 'employed collectors' segment; in other words, consumers perceived collecting as a complex task that requires certain skills and resources to be available within a six-month time-frame (Hypothesis 4 in the short-term horizon).

4.3.2 'Home-based collectors'

Analysis of the second cluster revealed a positive relationship between self-identity and attitudes towards the purchase of collectibles. Hypothesis 5b, which had proposed that self-identity positively influences attitudes towards the purchase of collectibles, was thus confirmed for this group. The structural relationships of purchase intention showed that attitude influenced purchase independently of the time horizon. This was a confirmation of Hypothesis 1, according to which there is a positive relationship between favorable attitudes towards collecting and purchase intention of collectibles.

Perceived behavioral control was a short-term determinant for purchase intentions (as it was for the first cluster), which suggests that the intention of homemakers to buy collectibles in the following six months is determined by their available resources and possibilities. Hypothesis 4 was thus confirmed (at least for the short-term) in this cluster.

4.3.3 'Mature collectors'

In the third cluster, self-identity was shown to be a significant positive antecedent for purchase intention; however, no other significant relationships were found and the extracted variance did not meet the minimum requisites.

It would seem that pensioners and retirees aged more than 65 years do not possess strong intentions that can effectively predict behavioral intention (Petty & Krosnick, 1995).

4.3.4 'New collectors'

Finally, with respect to the fourth cluster, attitudes towards purchase were positively and significantly influenced by self-identity. Young collectors showed a positive predisposition towards collecting as a way of both standing out from other people and obtaining their acceptance (Hypothesis 5b). This finding is in accordance with Pearce (1994), who reported that families in the collecting sector frequently encourage younger members of the family towards collecting in accordance with family tradition.

Intentions among 'new collectors' also varied according to the time-frame. In the short term, intention was positively and significantly related to perceived behavioral control (Hypothesis 4). Collectors in this group perceived that having more resources and skills to invest increases the likelihood of collecting. This finding can be explained by the fact that young students often have access to few resources, and developing the necessary abilities and self-trust is more complicated. Long-term intention was positively and significantly determined by attitude towards purchase. Although they considered that one must initially possess certain requisites, once they have overcome these obstacles their long-term intentions are determined by a positive predisposition (in accordance with Hypothesis H1).

5. Conclusions and implications

The present study has evaluated two types of models that can be used to explain this type of purchase behavior: (i) the TPB model and its recent modifications (Ajzen, 1991; Smith et al., 2008); and (ii) the TSPA model (Petty & Krosnick, 1995). Although both models share the same constructs, the structures of the models differ in the importance that they attach to behavioral attitudes.

With regard to the modified TPB model, the present study concludes that: (i) descriptive and injunctive norms are independent constructs that have a separate influence on behavioral intention, although descriptive norms did not have a statistically significant role in predicting collecting behavior; and (ii) self-identity is an important component of behavioral intentions that has an association with collectible consumption as a way of establishing a sense of identity and reflecting differences among social groups.

Of the two models examined in the study, the TSPA was shown to have a closer fit to the observed behavior. It would therefore seem that, in the context of collecting behavior, attitudes cannot be considered on the same level as subjective norms and self-identity. Collecting apparently requires a positive predisposition to activate the intention to collect, which would explain why the TPB did not offer an adequate explanation of this behavior. A positive attitude in the case of collectors would show itself as a hopeful attitude towards commencing a collection and spending leisure time and resources on this activity.

By contrasting the different relationships in the model and identifying four consumer segments, the study has confirmed that the collecting market is, indeed, heterogeneous and characterized by a variety of behavioral patterns. The only point in common among the four segments of the market was the relevance of self-identity—a variable that serves as an antecedent of attitude, and, through it, of intention. All collectors, independently of their position, generate a positive predisposition towards collecting as a way of being different and signaling their status. This implies a close relationship with the collected objects. The study also found that descriptive norms did not show a significant influence on purchase attitudes in any segment. The need for this variable being included in models of collectors' purchase behavior has thus been called into question.

The other influential relationships varied from one segment to another. Perceived behavioral control was a direct antecedent of short-term intention for three of the four segments ('employed', 'home-based', and 'new' collectors'). It is thus apparent that time horizon is an important factor in the short term (six months), during which available resources and skills will influence purchase intentions. To meet short-term business goals, it would seem that companies should facilitate the search for, and financing of, collectibles. Businesses that offer collectibles must also consider attitudes towards purchase, which differ among segments.

For 'employed collectors', attitudes are not an antecedent of purchase intention, which presents a picture of collecting as a leisure activity with high drop-out rates and irregular activity. Among 'home-based collectors', attitudes determine behavioral intention—both in the short term and the long term. Once collectors develop a positive predisposition, their attitudes remain constant despite the fact that they do not spend large sums. 'Mature collectors' have weaker attitudes that could not be proven to influence their behavioral intentions. The attitudes of 'new collectors' influence their long-term collecting intention; although they initially consider that resources are a fundamental requirement for collecting, they subsequently collect because of their positive attitudes. Finally, 'employed collectors' also showed the influence of injunctive norms on their attitudes. This might be a consequence of the members of this group searching for prestige among different social groups or wanting to establish social networks.

The results have other implications for managers in the collectibles industry. In particular, self-identity has been identified as a determinant of intention. Businesses should therefore market goods that satisfy self-identity among purchasers by: (i) offering goods that are rare and distinctive (limited or collectors' editions); (ii) staging events exclusively for members of collecting clubs; and (iii) promoting competitions and contests in which members' collections can be evaluated by juries and fellow collectors. Moreover, businesses that are oriented towards 'employed collectors' should concentrate on informing collectors about their products, establishing attractive programs that prevent drop-out, and communicating the advantages of participating in social events related to collecting. Businesses oriented towards 'home-based collectors' should market moderately priced products that encourage self-identity among their purchasers—such as collections of miniatures that can be shown off to other people. Businesses that cater to 'mature collectors' should offer collections that are in high demand—because these collectors have been in the market for a long time. These businesses should therefore identify the objects in greatest demand, and then market these objects with differentiating qualities. Finally, businesses that are interested in capturing future collectors (that is, the 'new collectors') should offer interesting products that are attractively priced. These companies should stimulate the creation of social events at which these collectors can develop their skills. They should also create Internet platforms for buying and selling collectibles, as well as exchanging opinions (discussion forums).

The study has also shown that most collectors do not seek an economic profit from their collection. Investment companies that specialize in collectibles should make an effort to communicate this possibility to consumers, which can satisfy different investing profiles and offer appreciation without having to invest large sums.

Finally, certain limitations of this study are acknowledged: (i) the characteristics and size of the sample; (ii) other explicatory, moderator, and antecedent relationships are known to exist that were not included in the present study; (iii) the inestability and high drop-out rate that characterizes collecting activities.

Given that this is the first study on the purchasing behaviors of collectors in Spain, there are numerous attractive research paths to be pursued. These could include: (i) including the values of collectors as a predictive variable for purchasing intention; (ii) analyzing common collector values to compare collectors across cultures; (iii) studying drop-out motives to assist industry members in the design of consumer loyalty plans; (iv) augmenting the sample size; and (v) considering collecting as a modality of hedonistic behavior.

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