An analysis of consumer impulsivity and a proposed scale to measure impulse behaviour

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Abstract
In this work different conceptual aspects of impulsive buying are analysed and an exploratory analysis and a measurement of a new impulsive buying scale is carried out. Special attention is paid to the analysis of the dimensions of impulsiveness in purchasing and to the similarities and key differences with compulsive consumption. To follow, an impulsivity measurement, using an empirical study representative of the Spanish population, is presented. A lognormal structure of the theoretical behaviour is found, and the scale shows a suitable reliability to be used. Finally, a set of conclusions and future research lines are proposed.

Key words: Consumer behaviour, impulsivity, impulse buying, compulsive behaviour, impulsiveness, scale, Spain.

JEL code: M31, M39.

Introduction
In the scope of consumer behavior, the study of behaviors derived from the purchasing process has taken up a great deal of academic efforts. Here is where the contributions centred upon analysing the impulsive or compulsive –pathological– purchasing behavior, considered as “the dark side of consumer behavior” (Brown, 1995; Wansink, 1994), are positioned.
Most of the studies that analyse impulsiveness and impulsive purchasing have centred on its most extreme version—compulsive behavior—from a mainly psychological perspective (Dougherty et al., 200; Faber and O’Guinn, 1992; Hassy and Smith, 1996; Heaven, 1991; O’Guinn and Faber, 1989). There are not, on the other hand, many studies that focus on the assessment and analysis of impulsiveness itself as a differentiated behavior (Dittmar and Drury, 2000).

The analysis of impulsiveness in purchasing (IP) is becoming relevant due to the following main four factors: (1) the growing effort of companies towards a communication strategy more centred upon emotional aspects, (2) the development of a western society of higher material well-being and more social concern for the rising development of emotional and consumption-addicted patterns (CECU, 2000), (3) the ever-expanding competition at retail level, that leads to the intensive deployment of emotional stimuli in points of sale (stores) and (4) that many purchasing decisions are taken at the point of sale.

Within this work we will analyse different conceptual aspects of impulsive purchasing and we make a distinction between IP and compulsive purchasing (CP), showing the main existing multi-item scales used destined to measure the IP degree. Some of the situations and decisions taken during the purchasing process are expounded. Next, we propose and analyse a new scale to measure the IP degree and we verify whether the subjects present different degrees of impulsiveness. Finally, we offer a series of conclusions and suggestions as to future work lines.

Conceptual aspects

Impulsiveness in purchasing and impulsive purchasing

The earlier works on impulsiveness in purchasing hark back to the second half of the past century (Clover, 1950; Du Pont, 1965) and approach it as the lack of a “previous plan”, where the consumer does not act as a rational and methodical being. However, no consensus has been reached as, although this approach has been argued to be unsuitable (Kollat and Willet,
1967; Rook and Gardner, 1993; Rook and Hoch, 1985), the dimension of “unplanned purchasing” is present in almost every definition of impulsive buying (Applebaum, 1951; Davidson, 1966; Weinberg and Gottwald, 1982; Sheth, Mittal and Newman, 1999), Stern (1962) claims that, besides “no planning”, another basic axis of the concept is the “exposure to a stimulus”, propounding four purchasing types: planned, purely, reminder and suggestion impulsive purchasing. Along the same lines, Rook and Hoch (1985) and Rook (1987) sustain that impulsive purchasing is not just of an unplanned nature, but that there are actually underlying psychological factors. This approach is supported by Hirschman and Stern (1999) who highlight the existence of a strong emotional component.

Rook (1987), from a psychological perspective, defines “impulse buying” as “sudden, often powerful and persistent urge to buy something immediately... is hedonically complex and may stimulate emotional conflict... is prone to occur with diminished regard for its consequences” (p.191). This author reveals the existence of eight basic characteristics in impulsive purchasing: the spontaneous and sudden desire to act, the strength of impulse, the fact that it is exciting and stimulating, the fact that there is synchronicity (being at the right time and place), fantasy, hedonism, existence of a conflict and a disregard for consequences. Impulse is, therefore, a tendency to act suddenly and with no forethought, which agrees with what is supported by Dickman (1985, 1990) and Eysenck and Eysenck (1977). The phenomenon is an extraordinary experience, fast and emotional rather than rational (Weinberg and Gottwald, 1982).

On the other hand, Piron (1991) says that these dimensions are not adequate, as they tend to focus upon purchasing in itself rather than upon the person who carries it out. In this case, the consumer is merely highlighted as behaving abnormally. Piron points out that impulsive purchasing cannot be defined unless the cognitive and emotional reactions produced are acknowledged. Contrary to Rook and Hoch (1987), he considers that psychological and emotional reactions on the part of the consumer are not an exclusive part of impulsive purchasing, but variables of
purchasing at large. According to him, and along the same lines as Engel, Kollat and Blackwell (1978), unplanned purchasing is a wider construct, as it is accomplished with no previous acknowledgement of the problem and with an intention to purchase undefined when entering an establishment.

Table 1 presents a summary of the basic dimensions we have detected to define impulsive purchasing and how they are presented in different analysed definitions.

**Table 1. Dimensions of impulsiveness in purchasing**

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Elements detected in the definitions of impulsive purchasing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spontaneous</td>
<td>Unplanned; No previous intention on entering the establishment; Spontaneous desire to act; No response to a previous problem.</td>
</tr>
<tr>
<td>Inductive</td>
<td>Response to stimuli; Deliberate action to take advantage of bargains.</td>
</tr>
<tr>
<td>Emotional</td>
<td>Search for emotion; Spontaneous desire to act; No response to a previous acknowledged problem; Hedonistic consumption.</td>
</tr>
<tr>
<td>Temporary</td>
<td>Decision taken on the spot; Spontaneous desire to act; Urgent desire; Quick performance.</td>
</tr>
<tr>
<td>Psychological</td>
<td>State of psychological unbalance; Psychological conflict and inner fight; Lack of self-control; Psychological reaction without control.</td>
</tr>
<tr>
<td>Assessing</td>
<td>Reduced cognitive assessment; No assessment of consequences.</td>
</tr>
</tbody>
</table>


Subsequent research has gone into further detail on the causes of impulsive purchasing and its dimensions. It has been related to mood (Gardner and Rook, 1998, Piron, 1993), to stimuli received at the establishment (Abratt and Goodey, 1990), to the process of socialization of consumption (Fabien and Joelicoeur, 1993), to the existence of personal
traits (Harmstead and Lester, 2000) or to information processing (Burroughs, 1996). Hoch and Loewenstein (1991) characterise impulsive purchasing as an “inconsequential preference in time”, which is the result of a conflict between will and desire, distinguishing three inceptions: physical closeness to the product that generates the stimulus, immediacy and its high social comparison. Rook and Fisher (1995) have studied the normative influences in impulsive shopping and Betty and Ferrell (1998) have presented a model analysing its initiating factors, focusing their study on the pre- and post- shopping phases. These latter authors support the existence of a set of exogenous variables (time and money available, pleasure in shopping and a tendency to buy on impulse) that have a bearing upon another set of endogenous variables (positive/negative emotions, enjoying browsing in shops, feeling the need to purchase impulsively).

**Purchasing by impulse vs. compulsive purchase**

In the last years, many researchers have studied compulsiveness rather than impulsiveness in itself (Cox, Cox and Moschis, 1990; Hassay and Smith, 1996; O’Guinn and Faber, 1989; Faber, O’Guinn and Krych, 1989; Roberts, 1998; Scherhorn et al, 1990). Although both phenomena (“purchasing by impulse” and “purchasing compulsively”) may be classified within unplanned purchasing and impulsiveness is a good predictor of compulsiveness, (Mowen, 2000) there are clear differences between both of them.

From a strictly psychological viewpoint, Dickman (1990) backs the existence of a functional impulsiveness and a dysfunctional one. The first is a stable personality trait as thoroughness or sociability may be: This is taken to be so in many objective tests or personality trait inventories (Belloch and Báguena, 1986; Eysenck and Eysenck, 1977). The second refers to the lack of prevision that gives rise to problems in individuals. In the field of marketing, O’Guinn and Faber (1989) regard compulsiveness in purchasing (and compulsive purchasing) as a “chronic, repetitive purchasing that becomes a primary response to negative events or feelings”
(p. 155). Thus, “compulsion” is a stable behavior that—apparently—has a purpose and follows some specific rules.

The most operative definition, from our point of view, is that provided by McElroy et al. (1994) who merge purchasing behavior with non-adaptive conduct. They diagnose compulsive purchasing when there is: (A) a frequent concern for purchasing or irresistible impulses to purchase and (B) frequent purchasing of unnecessary goods, for a longer time than expected or beyond one’s means. In both situations a personal hardship, personal, working, family dysfunction, as well as financial and/or legal problems are produced. As we can see, impulsive purchasing is an episode or activity that comes under “normality” patterns, whilst the compulsive type results from and gives rise to a personal disorder. Table 2 shows the main similitudes and differences between impulsive and compulsive buying.

Further differences in materialism, socialisation and personal traits have been studied. O’Guinn and Faber (1989) and DeSarbo and Edwards (1996) point out that apart from emotional relief, there exists a higher materialism in compulsive purchasers as well as personality traits not present in other purchasers. Regarding their socialisation, a consequential difference has been detected (Mangleburg, Grewal and Bristol, 1999) in the influence of parents as socialising agents in “normal” and compulsive purchasers. For these, D’Astous, Maltais and Roberge (1990) have found that the influence of the “parents” agent has led them to develop a compulsive pathology even in childhood. On the other hand, the family structure also has a bearing upon a higher degree of compulsiveness in purchasing: young people from broken families—monoparental homes—present higher levels of compulsiveness than those who come from unbroken families (Elliott, 1994; Ridfleisch, Burroughs and Denton, 1997; Roberts, 1998; Scherhorn, 1990). However this same fact does not seem applicable to impulsive purchasing (Fabien and Jolicoeur, 1993).
Table 2. Similarities and key differences between impulsive and compulsive purchasing

<table>
<thead>
<tr>
<th>Impulsive purchasing (impulsiveness)</th>
<th>Compulsive purchasing (compulsiveness)</th>
</tr>
</thead>
</table>
| • Undefined purchasing intention before entering the establishment.  
• No planning in the activity or in the products to be bought.  
• Sudden impulse.  
• Complex phenomenon with emotional repercussion. | • Dysfunctional impulse.  
• Repetitive impulse in time.  
• Causes problems, distress and hardship.  
• Tends to be produced to assuage “low” emotional states.  
• Produces a negative post-shopping effect.  
• Chronical lack of self-control.  
• Refers to specific kinds of product but implication and price do not matter.  
• Favoured by a different socialisation, much fantasy and psychological dysfunctions which produce extreme states of mind. |

• Functional impulse.  
• Short-term impulse.  
• No interferences produced in the subject.  
• Tends to be produced in “high” emotional states.  
• Produces a positive post-shopping effect.  
• Sharp lack of self-control.  
• Diminished cognitive assessment.  
• Refers to all kinds of product but preferably with low implication and price.  
• No evidence of socialising differences and absence of extreme states of mind.  

As far as personal traits are concerned, Faber et al (1995) state that compulsive shopping is connected to psychological dysfunctions such as depression, anxiety, and low self-esteem. O’Guinn and Faber (1989) have measured fantasy, feelings towards purchasing and purchasing consequences and have found out that people more prone to shopping compulsively tend to show a degree of fantasy rather higher than that of “normal” consumers, apart from a high level of uneasiness and frustration, a feeling of loss of control and the appearance of domestic/family problems as main consequences. Finally, Faber and Christenson (1996) have discovered that compulsive purchasers experience more extreme states of mind, both in the positive and negative sense. However, it is more usual for the change
to take place from a negative to a positive state of mind in the pre- and purchasing process, whilst the opposite is produced in the “normal” consumer control group. Authors suggest that the compulsive purchaser uses his/her purchasing habits to direct and change his/her undesired states of mind.

**Measurement of impulsiveness in purchasing (IP)**

There are many psychometric scales specifically designed to measure impulsiveness and which are very much used in Psychology and Psychiatry. We may point out the Barratt scale, the impulsiveness Eysenck questionnaire, Holtzman scale and other subscales from other widely-used personality tests, such as the California Personality Inventory (Bayle et al., 2000; Patton and Stanford, 1995). In the field of Marketing we can highlight scales from Rook and Hoch (1985), Rook and Fisher (1995), Puri (1996) and Weun, Jones and Beatty (1998) to measure IP\(^\text{1}\) (Table 3).

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(1) In order to measure compulsiveness we mention Faber and O’Guinn (1992) and Valence, d’Astous and Fortier (1988). For a comparative analysis of compulsiveness scales see Cole and Sherrell (1995).

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**Table 3. Basic patterns of impulsiveness scales**

<table>
<thead>
<tr>
<th>Authors</th>
<th>Basic Descriptors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rook and Hoch (1985)</td>
<td>8 items tested in a 202-subjects sample. They point out at a 0.86 reliability and content validity. No more data published.</td>
</tr>
<tr>
<td>Rook and Fisher (1995)</td>
<td>9 items in a 5-point scale tested in 3 samples of 218, 212 and 104 subjects. Two reliabilities reported. 0.88 and 0.82. It possesses a sole dimension and content validity.</td>
</tr>
<tr>
<td>Puri (1996)</td>
<td>12 items generating 2 subscales: caution and hedonism. Tested in 3 samples of 93, 90 and 127 subjects. Points at a general reliability of 0.82. Discriminating and converging validity.</td>
</tr>
<tr>
<td>Weun, Jones and Beatty (1997)</td>
<td>5 items in a 5-point scale showing a one-dimension profile. It possesses discriminating and converging validity. Authors inform on 4 studies with samples of 212, 152, 124 and 550 subjects getting a between 0.81 and 0.86.</td>
</tr>
</tbody>
</table>
Methodology

Research objectives, hypotheses and sampling

As we have previously indicated, our empiric objective is to validate and to describe a scale to measure IP. Our methodological strategy involves five steps: (a) to analyse the scale’s reliability, (b) to analyse its dimensional structure, (c) to provide a basic description of the scale in an attempt to test whether it fits any theoretical statistical distribution, (d) to study the possibility of establishing levels of impulsiveness in purchasing, and if so (e) to study whether the assessments carried out on the subjects predict the placements at any of the levels mentioned in d step. We must point out that the patterns suggested by Churchill (1979) to create marketing scales have not been followed to carry out the study, since a closed database was used.

The data used from CIS² project number 2287 titled: “The economic behavior of Spanish people: consumption and saving, II” carried out in October 1998 throughout the whole national territory. Males and females older than 18 in 168 towns in all 46 provinces were interviewed. Multistep sampling, by stratified conglomerates, with proportional, non-weighted and a randomly distributed selection of two previous sampling units (townships and census sections) were used. Individuals were chosen by random route method quoted by sex and age, and personal in-depth interview was used. For a 95% confidence level, the sampling error is 1.96% with 2487 valid cases.

There are three reasons for using this database. The first is its Spanish populational representativeness in that it reaches the whole national territory, in comparison with commonly used samples in consumer behavior research arena. The second is that CIS uses an accurate methodology and controls the quality of fieldwork. Finally, even though the CIS study is essentially taken from a sociological viewpoint, it offers variables related to impulsive purchasing behavior we are to analyse.

(2) CIS is the Spanish Sociological Research Centre. It is a autonomous institution ascribed to the Spanish Ministry of Presidency. It has as a main aim the study of Spanish society. Its Web Site http://www.cis.es.
Variables to use
Table 4 shows the variables/items to be used in order to build the impulsiveness scale (as they appear in the CIS survey). Responses were rated on a four-point summative scale, ranging from “a lot” to “not a lot”, with the possibility for the interviewee to mark a fifth option “does not know”. This is interesting as it may offer a bearing on the interviewee’s self-knowledge level. We remark that few subjects have chosen to answer the “do not know” option (0.4% to 2%) hence we may interpret that, owing to the fact that they have had the chance to reply the opposite, they know their own behavior and are capable of discriminating it. We are dealing with a mainly conservative sample, that tends not to vary habitual decisions, are not given to improvisation and are indeed cautious in decisions affecting budget matters.
Table 4. Items and its descriptive statistics used in the scale

<table>
<thead>
<tr>
<th>Variables</th>
<th>Impulsiveness dimensions</th>
<th>% of replies and basic descriptors</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>A lot</td>
</tr>
<tr>
<td>Sometimes I find I have spent more than I hard.</td>
<td>Spontaneity</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Evaluative</td>
<td>5.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>N= 2482</td>
</tr>
<tr>
<td>I vary a lot in the products I buy because in time I get tired of buying</td>
<td>Psychological</td>
<td>5.3</td>
</tr>
<tr>
<td>the same things.</td>
<td>Emotional</td>
<td>N= 2475</td>
</tr>
<tr>
<td>I enjoy buying things I had not thought of buying.</td>
<td>Spontaneity</td>
<td>5.1</td>
</tr>
<tr>
<td></td>
<td>Emotional</td>
<td>N= 2482</td>
</tr>
<tr>
<td>When I buy I am open to changes and new ideas.</td>
<td>Psychological</td>
<td>11.0</td>
</tr>
<tr>
<td></td>
<td>Emotionality</td>
<td>N= 2454</td>
</tr>
<tr>
<td>Once in a while I buy or wear things I know people like me to buy or wear.</td>
<td>Psychological</td>
<td>2.4</td>
</tr>
<tr>
<td></td>
<td>Evaluative</td>
<td>N= 2487</td>
</tr>
<tr>
<td>Sometimes, money in hand, I buy things I had not thought of buying and</td>
<td>Spontaneity</td>
<td>4.6</td>
</tr>
<tr>
<td>surely without money I would not have bought them.</td>
<td></td>
<td>N= 2460</td>
</tr>
<tr>
<td>When I truly like something, I would be able to buy it at any price.</td>
<td>Emotional</td>
<td>5.1</td>
</tr>
<tr>
<td></td>
<td>Inductive</td>
<td>N= 2436</td>
</tr>
</tbody>
</table>

Notes: Percentages are about effective cases (not missing). Percentages “does not know” are about the global sample of 2500 just with 2347 valid cases for global scale analysis. “N” is the number of valid cases for each item, “Me” is the median, and “Var” is the variance.

Regarding this matter, variables 1, 6, and 7 refer to the above-mentioned budget conditioning, that 2, 3, 4, and 7 refer to the attitudinal component and that 1, 5, and 6 refer more directly to real behavior.

**Results**

The first analysis carried out is that of reliability. The Cronbach alpha gives forth a 0.72 value that, according to literature, can be considered good enough to carry out exploratory analysis (Nunnally, 1978).
shows that the suppression of any variable in the scale would imply an increase of internal dispersion and hence a decrease in the alpha value.

The descriptives for the scale may be considered sufficiently stable: the variance of the variable medians is very low (0.09) and the variance of the variable variances is almost null (0.007). In addition, Hotelling T$^2$, Tukey Additivity Test and ANOVA are observed to show highly noteworthy values. As the Tukey Additivity Test is almost the unit there is no multiplicative interaction amongst variables and, thus, the IP scale can be obtained by adding up the different items.

**Table 5. Basic reliability data of the items used in the IP scale**

<table>
<thead>
<tr>
<th>Items</th>
<th>If item is deleted</th>
<th>Mean</th>
<th>Variance</th>
<th>Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sometimes I find I have spent more than I had</td>
<td>18.99</td>
<td>11.78</td>
<td>0.71</td>
<td></td>
</tr>
<tr>
<td>I vary a lot in the products I buy because in time I get tired of buying the same things</td>
<td>18.97</td>
<td>11.18</td>
<td>0.68</td>
<td></td>
</tr>
<tr>
<td>I enjoy buying things I had not thought of buying</td>
<td>18.85</td>
<td>10.90</td>
<td>0.67</td>
<td></td>
</tr>
<tr>
<td>When I buy I am open to changes and new ideas</td>
<td>19.62</td>
<td>11.63</td>
<td>0.71</td>
<td></td>
</tr>
<tr>
<td>Once in a while I buy or wear things I know people like me to buy or wear</td>
<td>18.66</td>
<td>11.77</td>
<td>0.69</td>
<td></td>
</tr>
<tr>
<td>Sometimes, money in hand, I buy things I had not thought of buying and surely without money I would not have bought them</td>
<td>18.97</td>
<td>10.65</td>
<td>0.66</td>
<td></td>
</tr>
<tr>
<td>When I truly like something, I would be able to buy it at any price</td>
<td>18.93</td>
<td>11.81</td>
<td>0.71</td>
<td></td>
</tr>
</tbody>
</table>

Hotelling T$^2$ =2074.76, p=0.000; Tukey Test = 1.0057; ANOVA F= 354.29, p=0.000

Regarding its dimensional/factor structure, the main component analysis presents suitable results. The KMO is high (0.835), the Bartlett’s Test of Sphericity is significative (Chi=2426.76, p=0.000) and the lower MSA (0.803) is much higher than the 0.5 cut-off. However, the determinant of the correlation matrix is rather high (0.30), which may imply the absence of a clear structure of linear combination among the variables integrating the scale. As factors are drawn out (Table 6), just one presents an eigen-
value higher than the unit (Kaiser criterion), explaining the 38.073 % of the initial total variance of the scale.

Table 6. Factors and explained variance

<table>
<thead>
<tr>
<th>Factor</th>
<th>Eigenvalue</th>
<th>% of variance</th>
<th>% acum.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2.665</td>
<td>38.073</td>
<td>38.073</td>
</tr>
<tr>
<td>2</td>
<td>0.859</td>
<td>12.270</td>
<td>50.343</td>
</tr>
<tr>
<td>3</td>
<td>0.832</td>
<td>11.891</td>
<td>62.234</td>
</tr>
<tr>
<td>4</td>
<td>0.731</td>
<td>10.441</td>
<td>72.675</td>
</tr>
<tr>
<td>5</td>
<td>0.694</td>
<td>9.917</td>
<td>82.591</td>
</tr>
<tr>
<td>6</td>
<td>0.673</td>
<td>9.616</td>
<td>92.208</td>
</tr>
<tr>
<td>7</td>
<td>0.545</td>
<td>7.792</td>
<td>100.000</td>
</tr>
</tbody>
</table>

Table 7 shows principal descriptive statistics for the IP scale. We can see that statistical distribution has a pronounced positive skewness due to predominance of reduced IP values. As it is known, standard error (S.E.) of mean shows the degree of change in the mean in some samples if they are extracted from the same distribution. Since the standard error of mean is very low, we can state that the mean has a very stable value.

Table 7. Descriptive Statistics for IP Scale

<table>
<thead>
<tr>
<th>Statistics</th>
<th>Values</th>
<th>Estatistics</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>5.84</td>
<td>S.E. of Mean</td>
<td>0.008</td>
</tr>
<tr>
<td>Range</td>
<td>21 (0 - 21)</td>
<td>S.E. of Skewness</td>
<td>0.051</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>3.85</td>
<td>S.E. of Kurtosis</td>
<td>0.101</td>
</tr>
<tr>
<td>Skewness</td>
<td>0.679</td>
<td>Percentile 25</td>
<td>3</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>0.174</td>
<td>Percentile 50</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Percentile 75</td>
<td>8</td>
</tr>
</tbody>
</table>
To follow, we have analysed whether the frequency distribution fits to any distribution function of theoretical statistics, obtaining a good goodness-of-fit for lognormal theoretical distribution, because the correlation between empirical and estimated data is 95.7%. A characteristic of this distribution is the “central mass” containing –theoretically– 68% of the population, which enables us to create three impulsiveness levels (see Table 8) well adjusted to the particular behavior of the lognormal function.

Table 8. Levels of impulsivity in IP scale

<table>
<thead>
<tr>
<th>Level of IP</th>
<th>IP scale range</th>
<th>Sample in each nivel</th>
<th>Percentages</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Theoreticals</td>
<td>Empirics</td>
<td>By level</td>
</tr>
<tr>
<td>Low</td>
<td>0.000 - 2.125</td>
<td>0 - 2</td>
<td>502</td>
</tr>
<tr>
<td>Typical</td>
<td>2.126 - 9.751</td>
<td>3 - 10</td>
<td>1550</td>
</tr>
<tr>
<td>High</td>
<td>9.752 - 21.000</td>
<td>11 - 21</td>
<td>295</td>
</tr>
</tbody>
</table>

Median in lognormal distribution = 4.589 ; Lognormal dispersion factor = 2.159

A first level would include the slightly impulsive subjects, with a scale mark no higher than 2 (21.39% of the sample). A second level is made up of 66.04% of the subjects, defined as typical or normal, due to their average impulsiveness level. Finally, the third group has a high dispersion and is made up of those subjects marked at IP with a value equal or higher to 11, namely 12.57% of our sample.

Finally, in order to study if the assessments of the ratings given by subjects on the scale items permit us to foretell their ascription to some of the impulsiveness levels detected, we have proceeded to carry out a discriminating multiple analysis. The dependent variable contains the three impulsiveness levels and the independent ones are items deployed to build up the IP scale. Table 9 shows that the tests of the likeness of group medians (Wilks’ Lambda) are highly significant, as a consequence we can conclude that the means of the three groups are different.
Table 9. Standard coefficients and Wilks’ Lambda for each IP item

<table>
<thead>
<tr>
<th>Items</th>
<th>Wilks’ Lambda Value</th>
<th>p</th>
<th>F1</th>
<th>F2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sometimes I find I have spent more than I had</td>
<td>0.766</td>
<td>0.000</td>
<td>0.435</td>
<td>-0.029</td>
</tr>
<tr>
<td>I vary a lot in the products I buy because in time I get tired of buying the same things</td>
<td>0.699</td>
<td>0.000</td>
<td>0.391</td>
<td>-0.004</td>
</tr>
<tr>
<td>I enjoy buying things I had not thought of buying</td>
<td>0.658</td>
<td>0.000</td>
<td>0.370</td>
<td>-0.334</td>
</tr>
<tr>
<td>When I buy I am open to changes and new ideas</td>
<td>0.699</td>
<td>0.000</td>
<td>0.473</td>
<td>0.812</td>
</tr>
<tr>
<td>Once in a while I buy or wear things I know people like me to buy or wear</td>
<td>0.742</td>
<td>0.000</td>
<td>0.293</td>
<td>-0.446</td>
</tr>
<tr>
<td>Sometimes, money in hand, I buy things I had not thought of buying and surely without money I would not have bought them</td>
<td>0.658</td>
<td>0.000</td>
<td>0.331</td>
<td>-0.074</td>
</tr>
<tr>
<td>When I truly like something, I would be able to buy it at any price</td>
<td>0.771</td>
<td>0.000</td>
<td>0.443</td>
<td>0.117</td>
</tr>
</tbody>
</table>

The *Hit Ratio* is 0.865, and is thus correctly suited to 86.5% of the subjects. Table 10 shows that for slightly and highly impulsive groups the classification is perfect, whilst the typical group presents solely 79.6% of the subjects primarily positioned as correctly forecast.
Conclusions and future work lines

The literature has not shown a clear difference between impulsiveness and compulsiveness. Henceforth, this work expounds its individualised definitions, distinguishing them upon the basis of behavioral and psychological criteria. We have also shown the existing scales to measure IP. Our research shows the steps followed to build up a scale to measure impulsiveness in purchasing, obtaining high levels in the most significant statistical data. We have also found that subjects with a different level of impulsiveness show significantly behavior regarding situations and/or decisions produced during the purchasing process.

This work actually offers an approximation to the phenomenon of impulsiveness in purchasing, with representative results of the Spanish population, and attempts to be a starting point for other subsequent studies. It could be argued that the scale analysed has not been built up “ad hoc” but derives from a survey with a sociological approach. Nevertheless, the authors believe that it permits a suitable approach to the phenomenon, while at the same time providing capable of fulfilling the minimum requisites (reliability, discrimination, goodness-of-fit). The scale provides us for the first time with the chance, though exploratory, to carry out a representative classification in three segments according to their proclivity towards impulsive behavior in purchasing.

Among the limitations of the work we may highlight two. Firstly, the subjectivity component in the response of the subjects: rather than “actual
behavior” we have worked with “declared behavior” or declared but not observed perception. This can produce an evident skewness in the information provided, as impulsiveness possesses a strong emotional charge and stands out for the sake of its spontaneity. Secondly, certain factors have been unheeded such as behavioral unconsciousness, psychological and emotional aspects or the importance of the time/situation closeness between phenomenon and information gathering.

Finally, we think it would be interesting to expand this research in such a way as to: (a) analyse more deeply the existing scales along with the one presented here to establish a valid and reliable measuring tool, (b) take into account information on the emotional and psychological component, using methodologies more suitable than survey by personal interview (direct observation, experiment or by analysis of the pre-purchasing intentions and the result of the genuinely performed purchase –post purchase–) and (c) study the existing relationship between the impulsiveness phenomenon and specific socio-economic, demographic and psychographic variables. These questions constitute future work lines.

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