Esic Market Economics and Business Journal
Vol. 46, Issue 2, May-August 2015, 393-417

Influence of promotional strategy on private label sales versus manufacturer brand sales in the supermarket and hypermarket channels: An Analysis from the method of stepwise regression

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Abstract

The current study aims to research the promotional strategies targeted to the consumer of a single-product category. Primarily, it focuses on the study of the influence made by the promotional strategies of Manufacturer brands (MB) in the sales of the whole category in general and, in the Private Label (PL) in particular. We use the Method of Stepwise Regression to obtain a Promotional Mix suited for the category of energy drinks in both distribution channels, the hypermarket and the supermarket. With a significance level of 95%, the display of the leader MB is the promotional strategy that exercises the most influence in the same, that being an 86% in the supermarket channel and a 66% in the hypermarket channel. Likewise, the display of the leader MB is the promotional strategy that makes a greater influence in the sales of the PL, that being an 83% and a 64% in the supermarket and hypermarket channels, respectively.

Keywords: Manufacturer brand, Private label, Promotional strategy, Promotional Mix.

JEL codes: C25, C35, M31, M37, M51.

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ISSN 0212-1867 / e-ISSN 1989-3558

DOI: 10.7200/esicm.151.0462.4i
http://www.esic.edu/esicmarket

Acknowledgements

To ACNielsen, leader enterprise in Research and Market Studies, for the data provided through the collaboration agreement with ESIC, Business & Marketing School.

Introduction

The promotional strategies have a greater presence in the sales, and in recent years they have become one of the most powerful tools of the marketing strategy for many companies and many markets (Kumar and Verma, 2015). The recession and the economic crisis have made consumers very dependent on promotional strategies, thus creating a generation of buyers that only buy promotional strategy products. In the last 40 years, promotional expenses have considerably increased, shifting the investment in advertising to the sales promotion (Strang, 1976; Walters and Mackenzie, 1988; Lal, 1990; González, 1995; Cruz, 1996; Dooley, 1997). Furthermore, the promotional strategy targeted to consumers shapes itself as one of best prospect marketing tools (Neslin, 2002, Suresh et al., 2015). Neslin (2002) believes that the promotional strategy is one of the most important elements of the enterprise marketing mix and defines it as an "action-oriented marketing event whose purpose is to have a direct impact on the behavior of the firm's customers". The promotional strategy is a competitive tool that has acquired greater importance throughout the time, both for manufactures as well as for retailers (Álvarez, Vázquez y De la Ballina, 2004). The idea of this term has evolved from being a mere instrument to achieve an immediate sell (Schultz et. al., 1998) to a technique that can be utilized in order to foster customer loyalty. For this study, a Nielsen Scanner database has been used. This tool allows for good retail estimates (Abe, 1991), which have provided us with a very big data sample regarding scanners placed in self-service stores, supermarkets and hypermarkets. The usage of scanner data enables the business management in the assortment, promotional and merchandising areas, in general, and in retail, the scanner methodology has become a revolution that has brought wide structural changes among companies (Rodríguez, 1997). Authors such as Penford (1994) appoint the power of the scanner technology when studying the the monitoring of promotional strategies, and others such as Braña et al. (1995) quote this tool as a possibility to measure the efficacy of the sales promotions.

The work environment consists of self-service stores (supermarkets and hypermarkets) equipped with ACNielsen and a sales surface greater than 10,700 sq feet. 45% of the data from the used sample belong to scanners placed in supermarkets, and the remaining 55% to scanners placed in hypermarkets. The demographics was the Iberian Peninsula and the Balearic Islands. Self-service stores belong to 8 Nielsen geographic areas, ranging from 0 to 7 (0: Metropolitan Area of Barcelona; 1: Northeast Area, which includes Catalonia, Zaragoza, Huesca and the Balearic Islands; 2:

Center-East Area; 3: South Area; 4: Metropolitan Area of Madrid; 5: Center Area; 6: Northwest Area, 7: Center-North Area).

PLs, which are among our study targets, have experienced a great momentum in recent years, defining a change in consumption patterns that has led to rethink the space in the shelves and eliminate some MBs from the stores (Iniesta and Agustín, 2001). The rapid growth experienced in recent years by the distributor-developed brands ended up surpassing the sales of the traditionally leader brands in some product categories. Occasionally, PLs have exceeded MBs in quality and assortment (Hoch and Barneji, 1993).

According to a study carried out by A.C. Nielsen (2015) for the PLMA's International Private Label Yearbook, the popularity of the PLs keeps growing. According to Nielsen as well, the value share of the PLs increased in 17 countries, reaching 40% shares in United Kingdom, Spain and Switzerland. As published in Kantar WorldPanel's1 data, the market share of the PL grew in Spain, especially in mass-market products, reaching a share of 32.3% by 2010. From that year on, the growth slows down reaching a 34% in 2014, a very slight growth, almost negligible, in comparison with 2013. Despite all, Kantar Worldpanel deems this situation transitory because according to their predictions, PLs will improve their sales while MBs will show a bearish trend. Historically, PLs have been associated with highly price-sensitive consumers or low purchasing power consumers. However, this concept must be dismissed.

This study aims to contribute to the understanding of one of the aspects that worries marketing responsibles -both manufacturers and distributors- the most, such as knowing which kind of technique or promotional mix is the most appropriate for their product category (Lemon and Nowlis, 2002). We explain how a promotional mix can be obtained for the energy drink category in both distribution channels, hypermarkets and supermarkets through the method of stepwise regression.

From the ACNielsen data consulted, it is inferred that the promotional strategies carried out in self-service stores (hypermarkets and supermarkets) are: display, brochure, display and brochure jointly, multipurchase, extra quantity, batch, coupon, loyalty card, direct prize and price flash. From the total of promotional strategies carried out under the category of self-service stores, 74% was carried out in the hypermarket channel and the remaining 26% in the supermarket channel. Moreover, the percentage of sales in the energy drink category in the self-service channels jointly with promotional strategies reaches a 58% in volume and a 60% in value, with greater sales in the supermarket channel (79% in volume and 81% in value) than in the hypermarket channel (30% in volume and 33% in value). The promotional strategies that are mostly-used by category in self-service stores are the display and the brochure, with a 46% and a 18% of the total, respectively and the lesser-used are the coupon and the price flash, with a 0.03% and a 0.09% respectively. It is also

(1) WordPanel is one of the main consumer panels in Spain. Instituto Kantar. http://www.kantarworldpanel.com/es

important to highlight the batch promotional strategies and the multipurchase with a 15% and a 10% respectively.

Methodology

Firstly, in order to obtain the Promotional Mix for the Category Sales in the Supermarket Channel and the Promotional Mix for the Category Sales in the Hypermarket Channel, the product category was studied longitudinally. To do so, once all promotional strategies of all category brands in the self-service channels were analyzed, the ones with a greater influence in the sales of the general category are studied. These will be the ones included in the promotional mix of the sales in each and every one of the distribution channels. Secondly, in order to obtain the Promotional Mix for the Private Label Sales in the Supermarket Channel and the Promotional Mix for the Private Label Sales in the Hypermarket Channel, the product category was studied transversely and particularly, the said study focused on the PL. To do so, the promotional strategies carried out by the PLs as well as by the rest of the MBs that have a greater influence in the sales of the PLs were studied. These will be the ones included in the promotional mix in each and every one of the distribution channels.

If the researcher does not have a method in advance and also if the explicative variables from where the researcher is starting are numerous to predict the behavior of the explained variable, procedures of variable automatic selection can be used, such as the method of stepwise regression for the most meaningful variables. In the present study, from the 40 explicative variables corresponding to the promotional strategies carried out by the PLs as well as by the MBs shown in chart 1, we aim to study the behavior of the sales category (variable explained in chart 2) in general, and the PLs in particular. In order to do so, we use stepwise regression models calculated by the stepwise method. Two regression studies have been carried out in each of the distribution channels, which have allowed us to select from the 40 original variables those that have a greater influence in the sales in every one of the channels. These said variables will be the ones included in the promotional mix.

Chart 1. Explicative Variables of the Stepwise Regression Models

Variable	Description
disBURN	Total of displays done by Burn
disRB	Total of displays done by Red Bull
disPL	Total of displays done by the PL
disOTHER	Total of displays done by the rest of the MBs
broBURN	Total of brochures done by Burn
broRB	Total of brochures done by Red Bull
broPL	Total of brochures done by the PL
broOTHER	Total of brochures done by the rest of the MBs
disbroBURN	Total of displays-brochures done by Burn
disbroRB	Total of displays-brochures done by Red Bull
DisbroPL	Total of displays-brochures done by the PL
DisbroOTHER	Total of displays-brochures done by the rest of the MBs
multipBURN	Total of multipurchases done by Burn
multipRB	Total of multipurchases done by Red Bull
mltipPL	Total of multipurchases done by the PL
multipOTHER	Total of multipurchases done by the rest of the MBs
extraqBURN	Total of extra quantities done by Burn
extraqRB	Total of extra quantities done by Red Bull
extraqPL	Total of extra quantities done by the PL
extraqOTHER	Total of extra quantities done by the rest of the MBs
batBURN	Total of batches done by Burn
batRB	Total of batches done by Red Bull
batPL	Total of batches done by the PL
batOTHER	Total of batches done by the rest of the MBs
coupBURN	Total of coupons done by Burn
coupRB	Total of coupons done by Red Bull
coupPL	Total of coupons done by the PL
coupOTHER	Total of coupons done by the rest of the MBs
loycarBURN	Total of loyalty cards done by Burn
loycarRB	Total of loyalty cards done by Red Bull
loycarPL	Total of loyalty cards done by the PL
loycarOTHER	Total of loyalty cards done by the rest of the MBs
dprizBURN	Total of direct prizes done by Burn
dprizRB	Total of direct prizes done by Red Bull
dprizPL	Total of direct prizes done by the PL
dprizOTHER	Total of direct prizes done by the rest of the MBs
pfashBURN	Total of price flash done by Burn
pfashRB	Total of price flash done by Red Bull
pfashPL	Total of price flash done by the PL
pfashOTHER	Total of price flash done by the rest of the MBs

Source: Self-compilation.

Chart 2. Explained Variables of the stepwise regression models

Variable	Description
Sales	Total sales of the category
SalesPL	Total sales of the PL

Source: Self-compilation.

Promotional Mix of the Total Sales in the Supermarket Channel

In order to obtain the Promotional Mix for the Sales Category in the Supermarket Channel the stepwise regression method is applied, aiming to reduce the number of model variables. We obtain a model in all steps of the algorithm. Later, in order to obtain the best model, we calculate the Bayesian Information Criterion (BIC) of every model obtained and we select the one that has a lower Bayesian information criterion. In case two criterions are even, we will choose the one with a lower number of variables, following the principle of parsimony. Ten regression models are obtained (Annex), which explain the sales of the category with a trust level of 95%, given that all have a similar corrected R2 value (0.92) and a significance value of the F change lower than the significance level that we work with, which is 0.05. Later, we study the Bayesian information coefficients (BIC), corresponding to all models, in order to select one of them as the relevant model.

Among the 10 models obtained, two of them are considered relevant for the supermarket channel. The first model is selected because it adds information about the promotional strategy that has a greater influence in the sales of energy drinks in the supermarket channel and the second one –that shows one of the lowest BIC and has the fewer level of variables– because it provides information on the set of promotional strategies that have a greater influence in the sales of the category in the supermarket channel.

Chart 3 shows both models. In the first relevant model with a corrected R2 of 0.86, the 86% of the sales of the category in the supermarket channel are determined by the displays of the leader MB with a significance level of 95%. In the second model with a corrected R2 of 0.92, 92% of the sales of the category are explained by the displays of the leader MB as well as by the displays of the second MB, the batches of the leader MB and by the displays and multipurchases of the PL, with a significance level of 95%.

Chart 3. Relevant Regression Models of the Sales in the Supermarket Channel

Explained Var.	Explicative Variables	Corrected R^2
Sales	disRB	0.861
Sales	disRB, multipPL, *bar*RB, disPL, disBURN	0.918

Source: Self-compilation.

Chart 4 shows the coefficients of the explicative variables from both models that we made relevant. From these two, we can write the mathematical expression of each of them.

Chart 4. Coefficients of the Explicative Variables of the Relevant Regression Models in the Sales of the Supermarket Channel

Model	Explicative Variables	Coefficients
1	(Constant)	6304.86
	disRB	1004.05
5	(Constant)	5393.30
	disRB	704.14
	multipPL	267.00
	*bat*RB	1550.43
	disPL	1079.22
	disBURN	132.47

Source: Self-compilation.

From these coefficients we can write a mathematical expression for each of the models. Thus, the mathematical expression for the first model is given by the following equation:

$$sales = 1004disRB + 6304$$

In the same way, the second model can be mathematically expressed by means of the following equation:

$$sales = 704disRB + 267multipPL + 1550batRB + 1079disPL + 132disBURN + 5398$$

Promotional Mix in the Total Sales of the Hypermarket Channel

In the same manner, in the hypermarket channel we obtain 16 regression models (Annex) that show a similar corrected R2 value (0.80) and have a significance value

of the F change lower than 0.05, so it can be considered that all of them explain the sales of the category in the hypermarket channel with a trust level of 95%.

Two of them are selected (chart 5). In the first relevant model with a corrected R2 of 0.66, 66% of the sales in the category in the hypermarket channel are determined by the displays of the leader MB with a significance level of 95%. In the second relevant model with a corrected R2 of 0.77, 77% of the sales in the category in the hypermarket channel are explained by the displays of the leader MB, by the batches of the leader MB, by the displays, by the brochures and by the direct prizes of the second brand.

Chart 5. Relevant Regression Models of the Sales in the Hypermarket Channel

Explained Var.	Explicative Variables	Corrected R^2
Sales	disRB	0.657
Sales	disRB, *dis*RB, broBURN, disBURN, dprizBURN	0.765

Source: Self-compilation.

Chart 6 shows the coefficients of the explicative variables of both models selected as relevant for the sales of the category in the hypermarket channel.

Chart 6. Explicative Variables Coefficients of the Relevant Regression Models of the Sales in the Hypermarket Channel

Model	Explicative Variables	Coefficients
1	(Constant)	30740.91
	disRB	771.68
5	(Constant)	30633.74
	disRB	387.30
	*bat*RB	2867.95
	broBURN	577.71
	disBURN	252.74
	dprizBURN	-1345.17

Source: Self-compilation.

From these coefficients, a mathematical expression for each of the models can be written. Thus, the mathematical expression of the first model is given by the following equation:

$$sales = 771disRB + 30741$$

In the same way, the mathematical expression of the second model is given by the following equation:

$$sales = 387disRB + 2868batRB + 578broBURN + 253disBURN - 1345dprizDBURN + 30634$$

Promotional Mix for the Sales of the PL in the Supermarket Channel

For the sales of the PL in the supermarket channel, we obtain 13 regression models (Annex). All 13 models show a similar corrected R2 value (0.92) and have a significance value of the F change lower than 0.05, thus, they can all be considered models that explain the sales of the PL in the supermarket channel with a trust level of 95%. Chart 7 shows the two models considered relevant. In the first one, with a corrected R2 of 0.83, 83% of the sales of the PL in the supermarket channel are determined by the displays of the leader MB with a significance level of 95%. In the second one, with a corrected R2 of 0.92, 92% of the PL sales are explained by the displays of the leader brand, the multipurchases and the batches of the second MB as well as by the displays and multipurchases of the PL, with a significance level of 95%.

Chart 7. Relevant Regression Models of the PL Sales in the Supermarket Channel

Explained Var.	Explicative Variables	Corrected R^2
salesPL	disRB	0.83
salesPL	disRB, multipPL, disPL, multipBURN, *bat*RB	0.92

Source: Self-compilation.

Chart 8 shows the coefficients of the explicative variables from both of the models that we selected as relevant for the PL sales in the supermarket channel. From them, their mathematical expression can be written.

Chart 8. Coefficients of the Explicative Variables of the Relevant Regression Models of the PL Sales in the Supermarket Channel

Model	Explicative Variables	Coefficients
1	(Constant)	-1435.18
	disRB	434.48
5	(Constant)	-295.68
	disRB	265.50
	multipPL	133.02
	disPL	676.67
	multipBURN	124.54
	*bat*RB	532.184

Source: Self-compilation.

The mathematical expression of the first model is given by the following equation:

$$salesPL = 434disRB - 1435$$

In this equation, PL sales in the supermarket channel are expressed according to the promotional strategy that has a greater influence on them, that is, the display of the leader MB (disRB).

In the same way, the mathematical expression of model 6 is given by the following equation:

$$salesPL = 265disRB + 133multicPL + 677disPL + 124multipBURN + 532batRB - 296$$

Promotional Mix for PL sales in the Hypermarket Channel.

In the hypermarket channel, 15 regression models (Annex) can be obtained. All of them with a similar corrected R2 (0.79) and nearly all of them with a significance value of the F change lower than 0.05, thus, all of them can be deemed to explain the sales of the category in the hypermarket channel with a trust level of 95%. Two models are selected (chart 9). In the first one, with a corrected R2 of 0.64, 64% of the PL sales in the hypermarket channel are determined by the displays of the leader MB with a significance level of 95%. In the second one, with a corrected R2 of 0.79, 79% of the PL sales in the hypermarket channel are determined by the displays of the first MB as well as by the batches, brochures, displays, direct prizes and extra quantities of the second MB.

Chart 9. Relevant Regression Models of the PL Sales in the Hypermarket Channel

Explained Var.	Explicative Variables	Corrected R^2
SalesPL	disRB	0.643
SalesPL	disRB, *bat*RB, broBURN, disBURN, dprizBURN, qextraBURN	0.788

Source: Self-compilation.

Chart 10 shows the coefficients of the regressive variables from both models selected by us as relevant for the PL sales in the hypermarket channel. From them, their mathematical expression can be written.

Chart 10. Coefficients of the Explicative Variables of the Relevant Regression Models of the PL Sales in the Hypermarket Channel

Model	Explicative Variables	B
1	(Constant)	-2004.02
	disRB	441.06
6	(Constant)	-1084.76
	disRB	167.52
	*bat*RB	1529.63
	broBURN	384.57
	disBURN	233.39
	dprizBURN	-1088.26
	qextraBURN	-1021.35

Source: Self-compilation.

The mathematical expression of model 1 for the hypermarket channel is given by the following equation:

$$salesPL = 441disRB - 2004$$

In this equation, the PL sales are expressed according to the promotional strategy with greater influence in them, that is, the display of the leader MB.

In the same way, the mathematical expression of model 6 is given by the following equation:

$$salesPL = 168disRB + 1530batRB + 385broBURN + 233disBURN - 1088dprizBURN - 1021qextraBURN - 1085$$

Conclusions

Given the great interest that the study of the promotional strategies in the distribution channels represents, both for manufactures and distributors, the current study aimed to contribute to the research of its influence in the sales of the category. Furthermore, as the evolution experienced by the PL sales in the studied period and the interest shown by the distributors in order to increase the PL sales in both distribution channels are clearly stated, we have also aimed to contribute to the knowledge of the influence of the MB promotional strategies on the PL sales in the energy drink category.

It is important to highlight that not all promotional strategies have the same influence in the sales of the category and the PL sales. The display promotional strategy carried out by the leader MB is the one that has a greater influence on the

same in both distribution channels. This influence –with a significance value of 95%– represents an 86% in the supermarket and a 66% in the hypermarket channel.

In the same way, the display promotional strategy carried out by the leader MB is the one that has a greater influence on the PL sales. Being this influence –with the same trust level– of an 83% and a 64% in the supermarket and hypermarket channels, respectively. From the above, it can be concluded that the influence of the first MB displays in the energy drink category is bigger in the supermarket channel than in the hypermarket channel.

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Annexes

Chart 11. Regression Models of the Sales in the Supermarket Channel

Model	R^2 corrected	Sig. of F change	BIC
1	0.86	0.00	18.45
2	0.89	0.00	18.21
3	0.90	0.00	18.11
4	0.91	0.00	18.05
5	0.92	0.00	17.98
6	0.93	0.00	17.89
7	0.93	0.00	17.86
8	0.93	0.00	17.86
9	0.93	0.00	17.86
10	0.93	0.00	17.85

Source: Self-compilation.

Chart 12. Explicative Variables of the Regression Models of the Sales in the Supermarket Channel

Model	Explicative Variables
1	disRB
2	disRB, multipPL
3	disRB, multipPL, *bat*RB
4	disRB, multipPL, *bat*RB, disPL
5	disRB, multipPL, *bat*RB, disPL, disBURN
6	disRB, multipPL, *bat*RB, disPL, disBURN, multipBURN
7	disRB, multipPL, *bat*RB, disPL, disBURN, multipBURN, dprizRB
8	disRB, multipPL, *bat*RB, disPL, disBURN, multipBURN, dprizRB, loycarBURN
9	disRB, multipPL, *bat*RB, disPL, disBURN, multipBURN, dprizRB, loycarBURN, multipRB
10	disRB, multipPL, *bat*RB, disPL, disBURN, multipBURN, dprizRB, loycarBURN, multipRB, coupRB

Source: Self-compilation.

Chart 13. Summary of the Relevant Regression Models of the Sales in the Supermarket Channel

Model Summary				
Model	**R**	**R squared**	**R squared corrected**	**Typical estimation Error**
1	.928(a)	.861	.861	9998.17505
5	.958(e)	.919	.918	7688.93330

ANOVA						
Model		**Square Addition**	**gl**	**Square average**	**F**	**Sig.**
1	Total	222218543662.056	1	222218543662.056	2222.997	.000(a)
	Residual	35886898060.051	359	99963504.346		
	Regression	258105441722.107	360			
5	Total	237117949885.516	5	47423589977.103	802.162	.000(e)
	Residual	20987491836.592	355	59119695.314		
	Regression	258105441722.108	360			

Coefficients						
Model		**Non-standarized Coefficients**		**Standarized Coefficients**	**t**	**Sig.**
		B	**Error típ.**	**Beta**		
1	(Constant)	6304.857	712.098		8.854	.000
	disRB	1004.053	21.295	.928	47.149	.000
5	(Constant)	5393.305	664.089		8.121	.000
	disRB	704.138	29.220	.651	24.098	.000
	multipPL	267.003	38.019	.135	7.023	.000
	batRB	1550.434	226.399	.110	6.848	.000
	disPL	1079.218	187.203	.133	5.765	.000
	disBURN	132.468	23.432	.129	5.653	.000

a Dependent Variable: SALES
Source: Self-compilation.

Chart 14. Regression Models of the Sales in the Hypermarket Channel

Model	R^2 corrected	Sig. of F change	BIC
1	0.66	0.00	21.26
2	0.71	0.00	21.12
3	0.73	0.00	21.04
4	0.75	0.00	21.00
5	0.77	0.00	20.93
6	0.79	0.00	20.86
7	0.80	0.00	20.79
8	0.81	0.00	20.78
9	0.81	0.00	20.78
10	0.81	0.00	20.76
11	0.82	0.00	20.76
12	0.82	0.00	20.74
13	0.83	0.00	20.74
14	0.83	0.00	20.74
15	0.83	0.00	20.75
16	0.83	0.00	20.74

Source: Self-compilation.

Chart 15. Explicative Variables of the Regression Models of the Sales in the Hypermarket Channel

Model	Explicative Variables
1	disRB
2	disRB, *bat*RB
3	disRB, *bat*RB, broBURN
4	disRB, *bat*RB, broBURN, disBURN
5	disRB, *bat*RB, broBURN, disBURN, dprizBURN
6	disRB, *bat*RB, broBURN, disBURN, dprizBURN, qextraBURN
7	disRB, *bat*RB, broBURN, disBURN, dprizBURN, qextraBURN, disOTHER
8	disRB, *bat*RB, broBURN, disBURN, dprizBURN, qextraBURN, disOTHER, disbroBURN
9	*bat*RB, broBURN, disBURN, dprizBURN, qextraBURN, disOTHER, disbroBURN
10	*bat*RB, broBURN, disBURN, dprizBURN, qextraBURN, disOTHER, disbroBURN
11	*bat*RB, broBURN, disBURN, dprizBURN, qextraBURN, disOTHER, disbroBURN, multipOTHER, multipRB
12	*bat*RB, broBURN, disBURN, dprizBURN, qextraBURN, disOTHER, disbroBURN, multipOTHER, multipRB, multipBURN
13	*bat*RB, broBURN, disBURN, dprizBURN, qextraBURN, disOTHER, disbroBURN, multipOTHER, multipRB, multipBURN, disbroRB
14	*bat*RB, broBURN, disBURN, dprizBURN, qextraBURN, disOTHER, disbroBURN, multipOTHER, multipRB, multipBURN, disbroRB, loycarRB
15	*bat*RB, broBURN, disBURN, dprizBURN, qextraBURN, disOTHER, disbroBURN, multipOTHER, multipRB, multipBURN, disbroRB, loycarRB, disRB
16	*bat*RB, broBURN, disBURN, dprizBURN, qextraBURN, disOTHER, disbroBURN, multipOTHER, multipRB, multipBURN, disbroRB, loycarRB, disRB, coupBURN

Source: Self-compilation.

Chart 16. Resumen de los modelos de regresión relevantes de las ventas en el canal hipermercado

Model Summary				
Model	**R**	**R squared**	**R squared corrected**	**Typical estimation Error**
1	.811(a)	.658	.657	40740.38246
5	.876(e)	.768	.765	33747.72475

ANOVA(q)						
Model		**Square Addition**	**gl**	**Square average**	**F**	**Sig.**
1	Total	1145594749247.464	1	1145594749247.464	690.209	.000(a)
	Residual	595860576021.181	359	1659778763.290		
	Regression	1741455325268.645	360			
5	Total	1337142656577.536	*5*	267428531315.507	234.811	.000(e)
	Residual	404312668691.109	355	1138908925.890		
	Regression	1741455325268.645	360			

Coefficients(a)						
Model		**Non-standarized Coefficients**		**Standarized Coefficients**	**t**	**Sig.**
		B	**Error típ.**	**Beta**		
1	(Constant)	30740.915	3259.910		9.430	.000
	disRB	771.685	29.373	.811	26.272	.000
5	(Constant)	30633.744	3272.358		9.361	.000
	disRB	387.299	38.609	.407	10.031	.000
	batRB	2867.954	308.631	.299	9.293	.000
	broBURN	577.709	76.371	.218	7.564	.000
	disBURN	252.736	39.904	.205	6.334	.000
	dprizBURN	-1345.171	238.585	-.160	-5.638	.000

a Dependent Variable: SALES
Source: Self-compilation.

Chart 17. Regression Models of the PL Sales in the Supermarket Channel

Model	R^2 corrected	Sig. of F change	BIC
1	0.83	0.00	17.00
2	0.89	0.00	16.60
3	0.90	0.00	16.50
4	0.92	0.00	16.30
5	0.92	0.00	16.30
6	0.93	0.00	16.20
7	0.93	0.00	16.20
8	0.93	0.00	16.20
9	0.93	0.00	16.20
10	0.94	0.00	16.20
11	0.94	0.02	16.20
12	0.94	0.02	16.20
13	0.94	0.02	16.20

Source: Self-compilation.

Chart 18. Explicative Variables of the Regression Models of the PL Sales in the Supermarket Channel

Model	Explicative Variables
1	disRB
2	disRB, multipPL
3	disRB, multipPL, disPL
4	disRB, multipPL, disPL, multipBURN
5	disRB, multipPL, disPL, multipBURN, *bat*RB
6	disRB, multipPL, disPL, multipBURN, *bat*RB, dprizRB
7	disRB, multipPL, disPL, multipBURN, *bat*RB, dprizRB, loycarRB
8	disRB, multipPL, disPL, multipBURN, *bat*RB, dprizRB, loycarRB, multipOTHER,
9	disRB, multipPL, disPL, multipBURN, *bat*RB, dprizRB, loycarRB, multipOTHER, loycarOTHER
10	disRB, multipPL, disPL, multipBURN, *bat*RB, dprizRB, loycarRB, multipOTHER, loycarOTHER, disbroOTHER
11	disRB, multipPL, disPL, multipBURN, *bat*RB, dprizRB, loycarRB, multipOTHER, loycarOTHER, disbroOTHER, coupBURN
12	disRB, multipPL, disPL, multipBURN, *bat*RB, dprizRB, loycarRB, multipOTHER, loycarOTHER, disbroOTHER, coupBURN, pfashBURN
13	disRB, multipPL, disPL, multipBURN, *bat*RB, dprizRB, loycarRB, multipOTHER, loycarOTHER, disbroOTHER, coupBURN, pfashBURN, multipRB

Source: Self-compilation.

Chart 19. Summary of the Relevant Regression Models in the PL Sales of the Supermarket Channel

Model Summary				
Model	**R**	**R squared**	**R squared corrected**	**Typical estimation Error**
1	.913(a)	.834	.833	4807.26596
5	.961(e)	.924	.922	3278.23239

ANOVA(n)						
Model		**Square Addition**	**gl**	**Square average**	**F**	**Sig.**
1	Total	41610445088.748	1	41610445088.748	1800.554	.000(a)
	Residual	8296420344.036	359	23109805.972		
	Regression	49906865432.785	360			
5	Total	46091748742.094	5	9218349748.419	857.776	.000(e)
	Residual	3815116690.691	355	10746807.579		
	Regression	49906865432.785	360			

Coefficients(a)						
Model		**Non-standarized Coefficients**		**Standarized Coefficients**	**t**	**Sig.**
		B	**Error típ.**	**Beta**		
1	(Constant)	-1435.184	342.387		-4.192	.000
	disRB	434.478	10.239	.913	42.433	.000
5	(Constant)	-295.680	243.449		-1.215	.225
	disRB	265.502	12.020	.558	22.088	.000
	multipPL	133.022	16.487	.153	8.068	.000
	disPL	676.674	79.881	.189	8.471	.000
	multipBURN	124.539	16.038	.177	7.765	.000
	batRB	532.184	95.800	.086	5.555	.000

a Dependent Variable: SalesPL
Source: Self-compilation.

Chart 20. Explicative Variables of the Regression Models of the PL Sales in the Hypermarket Channel

Model	Explicative Variables
1	disRB
2	disRB, *bat*RB
3	disRB, *bat*RB, broBURN
4	disRB, *bat*RB, broBURN, disBURN
5	disRB, *bat*RB, broBURN, disBURN, dprizBURN
6	disRB, *bat*RB, broBURN, disBURN, dprizBURN, qextraBURN
7	disRB, *bat*RB, broBURN, disBURN, dprizBURN, qextraBURN, disbroBURN
8	disRB, *bat*RB, broBURN, disBURN, dprizBURN, qextraBURN, disbroBURN, loycarRB
9	disRB, *bat*RB, broBURN, disBURN, dprizBURN, qextraBURN, disbroBURN, loycarRB, multipOTHER
10	disRB, *bat*RB, broBURN, disBURN, dprizBURN, qextraBURN, disbroBURN, loycarRB, multipOTHER, multipBURN
11	disRB, *bat*RB, disBURN, dprizBURN, qextraBURN, disbroBURN, loycarRB, multipOTHER, multipBURN
12	disRB, *bat*RB, disBURN, dprizBURN, qextraBURN, disbroBURN, loycarRB, multipOTHER, multipBURN, coupBURN
13	disRB, *bat*RB, disBURN, dprizBURN, qextraBURN, disbroBURN, loycarRB, multipOTHER, multipBURN, coupBURN, multipRB
14	disRB, *bat*RB, disBURN, dprizBURN, qextraBURN, disbroBURN, loycarRB, multipOTHER, multipBURN, coupBURN, multipRB, broOTHER
15	disRB, *bat*RB, disBURN, dprizBURN, qextraBURN, disbroBURN, loycarRB, multipOTHER, multipBURN, coupBURN, multipRB, broOTHER, broBURN

Source: Self-compilation.

Chart 21. Regression Models of the PL Sales in the Hypermarket Channel

Model	R^2 corrected	Sig. of F change	BIC
1	0.64	0.00	20.20
2	0.69	0.00	20.10
3	0.72	0.00	20.00
4	0.74	0.00	19.90
5	0.77	0.00	19.80
6	0.79	0.00	19.70
7	0.80	0.00	19.70
8	0.81	0.00	19.70
9	0.81	0.00	19.70
10	0.82	0.01	19.70
11	0.81	0.11	19.70
12	0.82	0.01	19.70
13	0.82	0.01	19.70
14	0.82	0.02	19.70
15	0.82	0.04	19.70

Source: Self-compilation.

Chart 22. Summary of the Relevant Regression Models of the PL Sales in the Hypermarket Channel

Model Summary				
Model	**R**	**R squared**	**R squared corrected**	**Typical estimation Error**
1	.802(a)	.644	.643	24029.60881
5	.890(f)	.791	.788	18512.70585

ANOVA(p)						
Model		**Square Addition**	**gl**	**Square average**	**F**	**Sig.**
1	Total	374227150966.264	1	374227150966.264	648.100	.000(a)
	Residual	207294533716.200	359	577422099.488		
	Regression	581521684682.464	360			
5	Total	460198706287.370	6	76699784381.228	223.797	.000(f)
	Residual	121322978395.094	354	342720277.952		
	Regression	581521684682.464	360			

Coefficients(a)						
Model		**Non-standarized Coefficients**		**Standarized Coefficients**	**t**	**Sig.**
		B	**Error típ.**	**Beta**		
1	(Constant)	-2004.023	1922.769		-1.042	.298
	disRB	441.055	17.325	.802	25.458	.000
6	(Constant)	-1084.760	1823.666		-.595	.552
	disRB	167.515	21.885	.305	7.654	.000
	batRB	1529.630	170.743	.276	8.959	.000
	broBURN	384.569	42.215	.251	9.110	.000
	disBURN	233.393	23.735	.328	9.833	.000
	dprizBURN	-1088.262	135.719	-.225	-8.019	.000
	qextraBURN	-1021.350	170.606	-.161	-5.987	.000

a Dependent Variable: SalesPL
Source: Self-compilation.

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