

Does Customer Satisfaction Affect Customer Loyalty Anyway? A Case Study in Retail Distribution

Paolo Chirico, Anna Lo Presti e Selim Tüzüntürk

Abstract

In the statistical literature of the last 20 years, PLS-Path modeling has been a common methodology for the analysis of customer satisfaction and customer loyalty. Since PLS-Path models are systems of causal linear relations between latent variables, they are suitable for modeling constructs as satisfaction, loyalty, quality, etc., which cannot be measured directly and objectively. Nevertheless these models are not so common in the practice of marketing studies. This is due to two main reasons: *i*) this methodology requires specific, generally expensive, software packages; *ii*) the lack of a number of explanatory case studies, easy and accessible for the most of marketing analysts. However the first cause is less and less binding: a variety of PLS-Path models can be implemented by the free R-package «plspm» now. Therefore an easy, but interesting case study is presented regarding the satisfaction and loyalty of customers of a supermarket in Bursa, Turkey.

The idea of the model is that the Overall Satisfaction of the supermarket customers depends on three main factors: *i*) quality of goods; *ii*) prices level; *iii*) convenience & pleasantness. Moreover, the three factors and the overall satisfaction are assumed to affect the customer loyalty. All these constructs are latent variables indirectly measured by manifest variables.

Some interesting findings have emerged: *i*) the customer loyalty degree depends on the perceived quality of the goods, but not on the overall satisfaction degree; *ii*) the prices level affects the customer satisfaction but not the customer loyalty. These findings are consistent with the profiles of the customers and the supermarket as well.

Keywords: customer satisfaction, customer loyalty, structural equation models.

1. Introduction

Since the management of the General Electric Company introduced the idea of Marketing Concept in Fifties, the issue of satisfaction and its measurement has become a central theme of corporate marketing. In the following years, especially in the early Eighties, on the basis of «Marketing» concept, the idea of Customer Satisfaction (Cs) and the need of monitoring it constantly became a focus point for companies' strategies of implementation of virtuous models of management.

In the early Nineties, the importance of Cs was recognized not only by companies but also by national governments and supranational institutions that started constantly measuring the customer satisfaction of their companies considering it as a very important variable for national competitiveness. The first design carried out in Sweden in 1989, the Swedish Customer Satisfaction Barometer (Scsb). This was followed by numerous designs such as the American Customer Satisfaction Index (Acsi), the European Customer Satisfaction Index (Ecsi), and the Norwegian Customer Satisfaction Barometer (Ncsb) and so on.

Generally, a company is considered to be well managed if its production of goods or provision of services is able to meet customer satisfaction, allowing a return on the investment which was made by the company in the production of goods or services. However, in the Cs assessment, it is wise to differentiate the companies that produce goods and services, the companies that produce for big customers, and for the end consumer, and the companies, which are wholesales company and retail sales company also. Besides that, a customer-oriented polity requires a good knowledge of the dynamics involving the relationship between customer satisfaction and its impact on customer repurchase intentions (Bolton and Drew 1991) or, more widely, on customer loyalty (Cl).

It is been investigated that relationship between customer satisfaction scores and actual loyalty differs greatly depending the customers are satisfied or very satisfied (Heskett *et al.* 1994).

In fact, often dissatisfied consumers do not complain but simply shop somewhere else. The management knows that, probably, only truly satisfied customers satisfaction remain loyal in the long run. Also it is well known that making a customer loyal costs much more than keep one faithful. In general, then, retailers appreciate and consider loyal customers who choose their stores despite the very tempting offers from other stores (Levy and Weitz 2001).

However, how much the overall satisfaction scores influence loyalty? Often the scores, coming out from some satisfaction surveys, are simply

a bad test for satisfaction. Some researches in the field of car companies, had demonstrated that, in time, 60-80% of customers who switched to a competitor were satisfied just prior to their defection and had highlighted that only 45% of customers repurchased even if more than 90% had said to be satisfied (Reichheld *et al.* 2000). So, it is important to investigate, according to the different areas, how the customers value the different aspects of business and how evaluating customer values and satisfaction (Parasuraman *et al.* 1988).

Measuring satisfaction of supermarket customers is a bit special problem. Supermarkets are very competitive entities; they often are placed at a short distance from each other, trying to attract customers with cheap deals. But even if the consumer behavior becomes a store loyalty, it must be understood as a complex factor. Although satisfaction is likely to increase the store loyalty (Bennett and Rundle-Thiele 2004), it cannot be sufficient by itself to ensure this fidelity in time since loyalty goes through different component (Bloemer and Casper 1995; Jacoby and Chestnut 1978). Indeed, loyalty can be affected by the quality of the service, the quality of the products, the availability of supermarket brand, the pricing policy but also by the parking availability, the proximity to other superstores, and last but not least, by the resistance to change. In fact, often some customers are reassured by frequenting a familiar place where surely finding the right products they need and where the arrangement of lanes are so well known that the time, considered a valuable asset, is not wasted looking for the right products. A supermarket offers products even though they are not produced by itself, nevertheless the store management has the responsibility of the mix chosen, of the arrangement of position in lanes and of the pre-sale and post-sale assistance. So, according to the principles of process management, in a supermarket there are different types of responsibilities some of which are delegated to specific people while others concern all the actors of the process. In fact, some people have the task of choosing the products by managing the market researches and listening the complaints, deciding timetables or the optimal usage of spaces while other responsibilities concern the courtesy at checkout points, the willingness to give information along the lanes, the attention to facilitate the customer in the choice of purchases. The knowledge of the relative impact of each component, on customer satisfaction becomes crucial in business strategy. Hence, the need of analyzing all the components that constitutes Cs and CI is essential in order to detect pivotal responsibilities. Nevertheless, the relationship between customer satisfaction and customer loyalty is less obvious than it appears, particularly in the case of retail distribution (Rundle-Thiele 2005): not always satisfaction entails loyalty as well as not necessarily loyalty is due

to satisfaction. The case illustrated in this paper deals with a Turkish supermarket that is an example of such a situation. The rest of the paper is organized as follows: Section 2 presents the study; Section 3 introduces the model and the methodology and Section 4 reports the results.

2. The study

The study focuses on the satisfaction and the loyalty of the customers of a supermarket in Bursa, Turkey. Bursa is the fourth most populous town in Turkey after Istanbul, Ankara and Izmir. Bursa has a voice in the Turkish economy with the following industries: automotive, automotive supply industry, textile, machine and food industries.

In Bursa, as well as in the other big cities of Turkey, big grocery store chains such as Carrefour, Metro, Migros and Kipa dominate the market. These groceries are usually located at the large shopping centers where clothing shops, white good shops, electronic devices shops, coiffeur shops, barber shops, cinemas, food restaurants, coffee shops and etc. are found together. Besides these market chains, some local market chains take part in the market. However, these local markets are apart from those large shopping centers because located separately. In addition to these, it should be underlined that wet markets, where fresh vegetables and fruits are available, are very common in Turkey. Turkish families, especially families of the working class, shop from wet markets every week. Nevertheless an increasing number of families of the middle and upper class prefer supermarkets. Özhan supermarket chain, the chain of the analyzed supermarket, is one of the largest local markets that have thirty-three large super markets located in five districts of Bursa. Özdilek, S,aypa and Akugur super market chains are the other three largest local markets in Bursa. Özhan super market separates from these three with charcuterie products. Especially, Özhan market managers travel around Turkey in order to offer various local cheeses to the market customers. The Mudanya Özhan market, where the survey was carried out, is one of the biggest markets around the district. The supermarket location is near the center of the rich residential area.

In performing customer satisfaction survey a convenience sampling method was used. In this method, sample is drawn from the part of population that is close to hand. Members of such samples are chosen primarily because they are both readily available and willing to participate (Weiers 2002). Survey was performed in one of the biggest markets of Özhan supermarket chain located nearby Mudanya District of Bursa. Since the supermarket is crowded at the weekends, the survey was carried

out in a weekend of March 2014. Customers were asked to answer the survey questions kindly; the first 200 customers who accepted to reply the survey were involved in the sample.

The questionnaire focuses on the overall satisfaction degree of the supermarket customers, and their satisfaction degrees about requirements assumed significant for customer satisfaction and customer loyalty. These requirements were selected on the basis of previous surveys of the supermarket managers and previous analyses of the authors (Chirico and Lo Presti 2012).

Other questions regard personal data as gender, age group, household size and type of loyalty to the supermarket (see appendix).

2.1. Descriptive analysis

The most standing out fact is that half customers are loyal customers (customers shopping every week), and more than ninety percent are at least regular customers (at least two times a month) (Tab. 1, variable Type). There is a little preponderance of men (54.5%), although the responder was generally a man when a couple was interviewed. The age class of 30-50 years old is more than half sample. About the customer needs, there are not significant findings: all the suggested needs are very important.

An other interesting fact regards the overall satisfaction degree: eighty six percent of customers are satisfied or very satisfied, and no one is unsatisfied (Tab. 1, variable Os). The sample is principally composed by loyal and satisfied customers. Then it seems there is a positive relation between satisfaction and loyalty as confirmed by the Table 2. Indeed, the rate of loyal customers among the very satisfied ones (69.6%) is nearly twice that among neutral customers (35.7%).

Nevertheless, this kind of analysis doesn't allow to examine in depth the relation between satisfaction and loyalty as well as the causes of sati-

Tab. 1. *Distributions of Type and Os*

Type	%	Os	%
Occasional	8.5	Neutral	14.0
Regular	39.5	Satisfied	74.5
Loyal	52.0	Very Sat.	11.5
Tot.	100.0	Tot	100.0

Tab. 2. Distributions of Type|Os (%)

Type Os	Neutral	Satisfied	Very sat.	Tot.
Occasional	21.4	6.0	8.7	8.5
Regular	42.9	41.6	21.7	39.5
Loyal	35.7	52.3	69.6	52.0
Tot.	100.0	100.0	100.0	100.0

sfaction and the causes of loyalty. The next section illustrates a model that allows to get more information about the role of satisfaction in the loyalty of those customers.

3. The Model

The model is based on two main variables: *i*) Overall Satisfaction (Os); *ii*) Customer Loyalty (Loy). Overall satisfaction is the final satisfaction of each supermarket customer after having evaluated his requirements about the supermarket commercial activity. Although each customer has personal requirements about his favorite supermarket, some requirements seem more important and common than others: low prices, high goods quality, courteousness of the staff, cleanliness, large parking lot, achievable location. These requirements are been measured by the questionnaire. In the model, they were summarized in three main factors: *i*) goods quality (Gq); *ii*) prices level (Pl); *iii*) convenience&pleasantness (Cp). Actually these factors reflect three main questions of a supermarket customer: *i*) which quality?; *ii*) how much?; *iii*) how convenient/pleasant? These questions were assumed to be the main drivers to customer satisfaction in the case on study. The overall satisfaction and the customer loyalty are assumed to be linearly dependent on those factors as reported in the following path model¹:

$$\begin{aligned} OS &= \beta_{01} + \beta_{11}GQ + \beta_{21}PL + \beta_{31}CP + \delta_1 \\ LOY &= \beta_{02} + \beta_{12}GQ + \beta_{22}PL + \beta_{32}CP + \beta_{42}OS + \delta_2 \end{aligned} \quad (1)$$

¹ A Path model is a system of regressions where the dependent variable of each regression is a regressor in the following regressions according a «logical» path.

The overall satisfaction was measured on a five-level satisfaction scale conceptually similar to the Likert scale: *1-very unsatisfied, 2-unsatisfied, 3-neither satisfied or unsatisfied, 4-satisfied, 5-very satisfied*. On the other hand, the customer loyalty was measured on a three-level scale: 1-loyal customer, 2-regular customer, 3-occasional customer. Such a scale is considered more objective than a direct five-level scale of declared loyalty. In this case, customer loyalty becomes a latent variable measured by a proxy variable: the supermarket attendance. Also the factors Pl, Gq, Sq should be treated as latent variables since they are the synthesis of blocks of requirements. Then, the model (1) is a system of linear equations between latent variables, known in statistics as *Structural Equation Model with Latent Variables* (Sem-Lv) (Bollen 1989; Kaplan 2000).

As latent variables, the factors Pl, Gq, Sq must be indirectly measured combining manifest variables (Ml), i.e. the satisfaction scores of the correspondent requirements. There are several ways of measuring latent variables by means of manifest variables; the most common method in case of a Sem-Lv is known as *Partial Least Squares-Path Modelling* (Pls-Pm) (Tenenhaus *et al.* 2005). The next section illustrates briefly this method.

3.1. Methodology: Pls-Path Modelling

Pls-Path Modelling is a two-step method:

1. At the first step, Lv scores are computed according to a measurement model and using the Pls algorithm (Wold 1985);
2. Then, Ols regressions are carried out on the Lv scores for estimating the parameters of the path-model equations.

The measurement model puts in relation each Lv (Y_j) with its Mvs (X_{jk}); it can be either reflective:

$$X_{jk} = \alpha_{jk}Y_j + \varepsilon_{jk} \quad (2)$$

or, in some cases, formative:

$$Y_j = \sum \omega_{jk} X_{jk} + \varepsilon_j \quad (3)$$

The reflective measurement is clearly a factorial model: each Lv is the principal common factor of a set of Mvs. The measurement is efficient if the Mvs are highly correlated (uni-dimensionality) and form a homogeneous system of measurement.

On the other hand, the formative measurement tries to model the psychological process that determines the factors represented by the Lvs. In this case, the measurement model is a regression model, and the Mvs should be lowly correlated in each block. A formative measurement model allows identifying which causes are the most important for each Lv. Unlikely formative measurement is not always easy to apply: a well identification of the causes of each Lv is needed *a priori*. In both kind of measurement the Pls Algorithm provides weights w_{jk} of a linear combination that determines the scores of each Lv²:

$$\hat{Y}_j = \sum \omega_{jk} (X_{jk} - \mu_{jk}) \quad (4)$$

Finally, Pls-Pm can be carried out on very small samples and doesn't require distributional assumptions. That is the principal strength of this method in comparison with other methods based on distributional assumptions (Jöreskog 1973).

4. Results

The model (1) was performed on the survey data using the R-package Plspm (Sanchez and Trinchera 2010). Since the Mvs of each block are requirements forming the corresponding Lv, a formative measurement was adopted.

About the measurement model (Tab. 3), we can note that the factor Gq depends mainly on «Wide variety of brands» (item 2.1) and «Quality of unpackaged groceries», that means the supermarket customers go after their favourite quality brands and quality fish, meat, fruit, etc. Another interesting result regards the Cp factor: such factor depends mainly on «Accessibility of location» (item 2.10) and «Presence of a large car parking» (item 2.11) and weakly on the other items of the block. This

² Generally, latent variables have zero mean and unit variance.

means that the supermarket customers give more prominence to the convenience, meant as accessibility by car, than to a pleasant environment or staff. An undeniable sign of concreteness.

However, the path model results are probably the most surprising (Fig. 1): customer loyalty seems depending on goods quality ($b_{L1} = 0.2087$), but not on overall satisfaction ($b_{L4} = -0.0017^3$), disagreeing with the findings in the Section 2.1. Actually, customer loyalty and overall satisfaction are correlated, but their correlation depends on common factors: good quality, price level, convenience&pleasantness. These factors affect significantly overall satisfaction as well as customer loyalty, then these variables are obviously correlated, but that correlation is not shown by the coefficient of Os in the regression of Loy. Indeed, in a regression equation, each coefficient explains the partial effect of the corresponding regressor after the effects of the other regressors. In other words, satisfaction affects loyalty when satisfaction is due to the factors that are significant for loyalty. Obviously, satisfaction depends on other factors summarized in the residuals f_s of the second regression (1), but those factors are not significant for loyalty. That means not all factors that produce satisfaction produce loyalty! Moreover, some factors can be very important for satisfaction and less important for loyalty and vice-versa.

Tab. 3. *Measurement model weights*

Lv	Gq			PI				Cp			
Item	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8	2.9	2.10	2.11
Weight	0.025	0.991	0.655	0.552	0.437	0.424	0.367	0.402	-0.16	0.923	0.577

³ The estimated value is so low to be not significant. Therefore, the negative sign of such value means nothing.

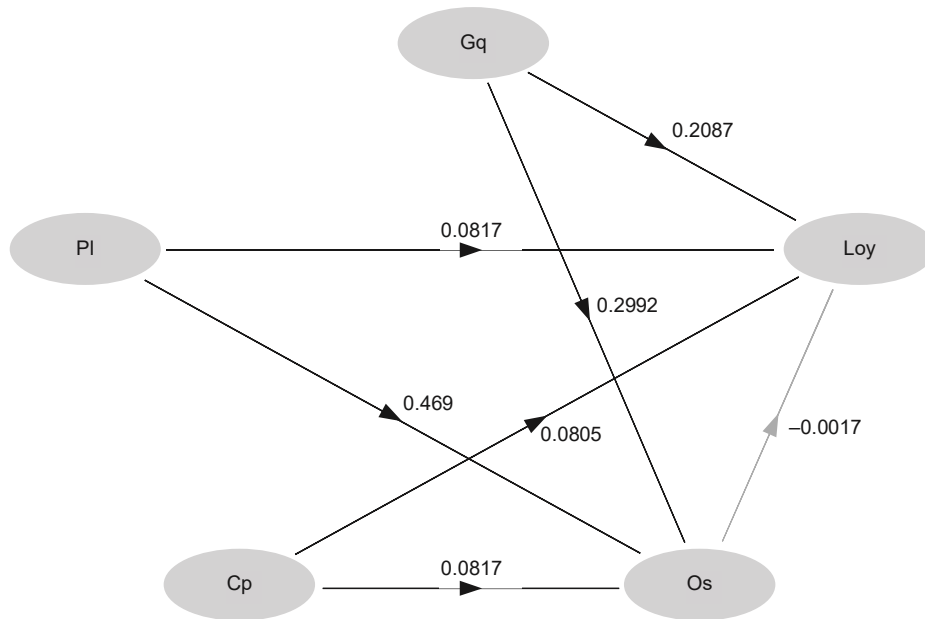


Fig. 1. The path model coefficients.

Prices level is the most important factor for the satisfaction of the supermarket customers, but probably, this factor mainly affects shortterm satisfaction, then it has a low effect on loyalty. On the other hand, good quality is less effective for satisfaction here, but it is more effective for loyalty. These customers are loyal if the quality is high even if the prices level is high, but obviously they don't like to pay a lot!

The picture is clear if the social context is considered: these customers belong to the middle-upper class of Bursa principally, they are willing to pay more for quality. So they prefer attend a high quality supermarket even though that is more expensive than popular wet markets.

5. Conclusion

This paper does not contest the belief that customer satisfaction is an important requirement for customer loyalty, nevertheless it is pivotal how such satisfaction has been achieved. Actually it would be appropriate to distinguish between short-term satisfaction and long-term satisfaction. Only the second kind of satisfaction produces loyalty. So, some factors

can be more effective for long-term satisfaction than for the short-term one. These factors are certainly effective for loyalty.

The case study demonstrates it: quality of goods is not the most efficient factor for satisfaction, but it is for loyalty. So, the supermarket had to keep on offering quality goods if it wants its customers remain loyal. Certainly that is true as long as the competitors offer lower quality goods at the same price level or the same quality goods at higher prices. The supermarket managers should not forget that their customers are overall satisfied if they are satisfied about the prices level.

The conclusions above are related to the customers as a whole, but often the customers could be quite heterogeneous about the reasons of their satisfaction and loyalty. In that case a model for each cluster of customers should be performed, but such clusters are not generally known a priori. Recently, several methods have been proposed to deal with unobserved heterogeneity in PLS-PM framework; among these we advise the Rebus-PLS method (Vinzi *et al.* 2010), which can be applied in R by the package «plsPM». We tried this method on the data, but no significant segmentation emerged. This means the sample might be rather homogeneous, nevertheless it is our intention to test other methods. The methodology on this field is constantly developing.

Appendix: the questionnaire

Section 1 Customer needs

Could you indicate, on a scale from 1 (no importance) to 5 (extreme importance), how much important you regard the following aspects of a supermarket?

- 1.1. *I find all types of products I need (food, household products)* |1| |2| |3| |4| |5|
1.2. *For each product, there are several brands and formats to choose* |1| |2| |3| |4| |5|
1.3. *The offers/promotions are frequent* |1| |2| |3| |4| |5|
1.4. *The staff is friendly and helpful* |1| |2| |3| |4| |5|
1.5. *The products are well exposed on shelves and there are not too many queues at the tills* |1| |2| |3| |4| |5|

Section 2 Customer satisfactions

Could you indicate, on a scale from 1 (not at all) to 5 (very much), how satisfied are you with the following aspects of a supermarket?

- 2.1. *Wide range of products (food, household products)* |1| |2| |3| |4| |5|
2.2. *Wide variety of brand/format of the goods* |1| |2| |3| |4| |5|
2.3. *Quality of unpackaged groceries (fish, meat, fruit...)* |1| |2| |3| |4| |5|
2.4. *General level of prices compared to other supermarkets* |1| |2| |3| |4| |5|
2.5. *Frequency and cheapness of discounted offers* |1| |2| |3| |4| |5|
2.6. *Availability of private labels and low-cost brands* |1| |2| |3| |4| |5|
2.7. *Cleanliness of location and exposition of products on shelves* |1| |2| |3| |4| |5|
2.8. *Kindness and helpfulness of the staff* |1| |2| |3| |4| |5|
2.9. *Queue up and waiting time at the tills* |1| |2| |3| |4| |5|
2.10. *Accessibility of location* |1| |2| |3| |4| |5|
2.11. *Availability of car parking* |1| |2| |3| |4| |5|
2.12. *Overall satisfaction* |1| |2| |3| |4| |5|

Section 3 Customer data

- 3.1. *Gender* |M| |F|
3.2. *Age group* |18-29| |30-50| |50-65/più di 65|
3.3. *Household size* |1| |2| |3| |4| |5| |6| |7| |più di 7| 3.4. *Types of customer* |Loyal|
|Regular| |Occasionale|

References

- BENNETT R., RUNDLE-THIELE S. (2004). Customer Satisfaction Should not Be the Only Goal. *Journal of Services Marketing*, vol. 18, n. 7, pp. 514-523.
- BLOEMER J., CASPER J. (1995). The Complex Relationship between Consumer Satisfaction and Brand Loyalty. *Journal of Economic Psychology*, vol. 16, pp. 311-329.
- BOLLEN K. (1989). *Structural Equations with Latent Variables*. New York: John Wiley and Sons.
- BOLTON N., DREW J.H. (1991). A Multistage Model of Customers' Assessments of Service Quality and Value. *Journal of Consumer Research*, vol. 17, pp. 375-384.
- CHIRICO P., LO PRESTI A. (2011). Clusterwise Pls-Path Modelling for customer Loyalty Analysis in Heterogeneous Markets: A Case Study on the Customers of a Superstore. *Italian Journal of Applied Statistics*, vol. 21, n. 3/4, pp. 265-280.
- ESPOSITO VINZI V., TRINCHERA L., AMATO S. (2010). From Foundations to Recent Developments and Open Issues for Model Assessment and Improvement. In Esposito Vinzi V., Chin W., Henseler J., Wang H. (eds.), *Handbook of Partial Least Squares: Concepts, Methods and Applications*. Berlin-Heidelberg: SpringerVerlag, pp. 47-82.
- HESKETT J.L., JONES T.O., LOVEMAN G.W., SASSER W.E., SHLESINGER L.A. (1994). Putting the Service-Profit Chain to Work. *Harvard Business Review*, vol. 72, n. 2, pp. 164-173.
- JACOBY J., CHESTNUT R. (1978). *Brand Loyalty: Measurement and Management*. New York: John Wiley and Sons.
- JÖRESKOG K. (1973). A General Method for Estimating a Linear Structural Equation System. In Goldberger D. (eds.), *Structural Equation Models in the Social Sciences*. New York: Academic Press, pp. 85-112.
- KAPLAN D. (2000). *Structural Equation Modeling: Foundations and Extensions*. Newbury Park, Ca: Sage.
- LeVy m., Weitz B.a. (2001). *Retailing Management*. New York: McGraw-Hill 2001.
- PARASURAMAN A., ZEITHAML V.A., BERRY L.L. (1988). Servqual: A MultipleItem Scale for Measuring Customer Perceptions of Service Quality. *Journal of Retailing*, vol. 64, pp. 12-37.
- REICHHELD F., MARKEY R., HOPTON C. (2000). The Loyalty Effect, the Relationship between Loyalty and Profits. *European Business Journal*, pp. 134139.
- RUNDLE-THIELE S. (2005). Elaborating Customer Loyalty: Exploring Loyalty to Wine Retailers. *Journal of Retailing and Consumer Services*, vol. 12, pp. 333-

344. SANCHEZ G., TRINCHERA L. (2010). *Partial Least Squares Data Analysis Methods*. <http://cran.r-project.org/web/packages/plspm>.
- TENENHAUS M., Esposito VINZI V., CHATELIN Y.M., LAURO C. (2005). Pls Path Modelling. *Computational Statistics & Data Analysis*, vol. 48, pp. 159-205.
- weieRs R.d. (2002). *Introduction to Business Statistics*. Wadsworth Group.
- WOLD H. (1985). Partial Least Squares. In Kotz S., Johnson N.L. (eds.), *Encyclopedia of Statistical Sciences*. NewYork: Wiley, pp. 581-591