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**ОБРАТНА ЛОГИСТИКА ПРИ ВИНО И ЗЕХТИН
MANAGEMENT OF REVERSE LOGISTICS ACTIVITIES IN WINE AND OLIVE OIL PRODUCTION****Maria José Varadinov^{1*}, Cristina Dias¹, Nicolau de Almeida¹, Dimo Atanasov Atanasov²**¹Polytechnic Institute of Portalegre, School of Technology and Management, Portugal²Agricultural University – Plovdiv, Bulgaria***E-mail: dinov@estgp.pt****Abstract**

The wine industries have specificities at strategic and operational level, as they depend on the quantity of grapes in each campaign. The weather conditions affect the availability and quality of production of the raw material (grapes). In turn, these factors affect the quantity and quality as well as the price of wine on the market. The return of the bottled wine, having reached the expiration date or change of quality, which influences the quality perceived by retail customers, especially the HORECA channel distribution (consisting of hotels, restaurants and cafes), requires adoption of a reverse logistics system. It is intended to analyze the logistics activities of companies that implement or not a system of reverse logistics and know the factors that significantly determine that adoption. The study is conducted through an online survey of companies with production facilities for wine and olive oil in the *Alentejo* region. As a result, it is expected to verify the impact of firm size, geographical areas of dispersion, the existence of information systems, technological investment, environmental awareness, the economic value of remanufacturing and legislation, on the adoption of a reverse logistics.

Key words: HORECA channel, reverse logistics, wine industry.**INTRODUCTION**

Reverse logistics systems have greater impact among the operation managers as well as senior executives of companies, driven by the significant economic, environmental, management, legislative and strategic implications for many organizations. A reverse logistics system defines a supply chain that is redesigned to efficiently manage the flow of products and parts intended for reprocessing, recycling or disposal (Dowlatshahi, 2000). This improvement of the supply chain is thus able to effectively use the resources that were previously not considered or used, and which can open new markets for many industries that were not foreseen earlier.

The product recovery process which can include repairing, reconditioning, remanufacturing or recycling must be seen also as an opportunity to gain a competitive advantage (Stock et al., 2002) and as a potential for improved yield scales by reducing raw material costs, compliance costs and liability, gaining access to new customers and increasing revenues (De Brito et al., 2002). Some researchers argue that a well-managed product return system generates revenues above costs incurred (Stock, 1998).

Against this background and in accordance with Gourscuth et al. (2000), the companies producing olive oil and wine have an interest in

finding a centralized solution that adds value to these products. The return of olive oil or bottled wine for having passed the expiry date or having suffered from changes in the quality, which influences the quality required by the retail customer, especially the Horeca distribution chain (consisting of hotels, restaurants and cafes), demands adoption of a reverse logistics system. It is intended, therefore, to analyze the logistics activities of companies that have implemented or intend to implement a reverse logistics system and identify and analyze the relative importance of the factors that significantly determine the adoption or non-adoption by businesses in the *Alentejo* region, producing wine and olive oil.

Thus the implementation of a reverse logistics program involves many operational and financial aspects, which determine productivity performance and supply. A critical analysis of the variables that affect the reverse logistics as well as their inner interactions can be quite valuable as an important source of information for decision makers. It is known also that enterprises generate large amounts of by products, that in most cases are underutilized. Against this background, companies, olive oil producers have an interest in finding a centralized solution that adds value to these products (Gourscuth et al., 2000).

THEORETICAL FOUNDATION AND HYPOTHESES

The Reverse Logistics is associated with a growing awareness of people and institutions to problems of environmental and economic character, the worrying shortage of raw materials globally and the increase of "green" products, that are environmentally friendly, "so there is the need to manage a reverse logistics flow to the traditional forward flow (between the point of final consumption and the point of origin) (Barroso & Machado, 2005). According to Andrade Ferreira and Santos (2009), the companies adhere to the Implementation of Reverse Logistics, due to law restrictions, competitive reasons, improvement of their image, economic upgrading, renewal of stocks and environmental responsibility. Thus reverse logistics gains significant importance with companies and, increasingly, managers become aware that starting is being increasingly recognized in the business community (Marques, 2013).

H1: Companies give much importance to the implementation of a reverse logistics system.

Currently, companies have moved more strategic weight to reverse logistics, in order to guide the use of reusable products (Tibben-Lembke and Rogers, 2001). However, the reverse flow of products from consumers to upstream businesses, has not received great interest. Reverse logistics is characterized by uncertainty and the need for rapid disposal of the product because the "organizational structures of companies (...) favor the transmission and free information processing" (Lopez et al., 2006, p. 34). The complexity and speed of logistics operations has a main benefit to provide. Therefore, companies need to invest more in technologies and systems that can increase the productivity of these processes, and not only focus on specific inverse activities. Thus, managers who get more reverse logistics activities management are investing more in technology and in this way achieve the most efficient processes (Rodriguez et al., 2007). According to Lopez (2004, p. 85) investment in information technology produces returns in the form of productivity gains".

H2: The use of support technologies by companies and their employees is relevant.

According to the Reverse Logistics Executive Council the cost of handling, transport and disposal of returned products is 35 billion annually to US companies, while reprocessing in the United States is 50 billion annually to the industry. The researcher Savaskan et al. (2004) found that if a certain

company does not organize properly their access to the products that have already been used it cannot benefit from an ideal remanufacturing. In this sense, the manufacturer is interested in aligning incentives for that purpose. Debo et al. (2005) examined the alignment of incentives in the other extreme, in other words, the remanufacturing of durable components. It should be noted that the supplier has no incentive to increase the durability of remanufacturing by the original equipment manufacturer, this translates into lower sales volume components. Ferguson et al. (2006) reported that the return rates can be influenced if the system is extended to the retailer.

In addition to the direct material cost savings, companies save on disposal and energy costs by remanufacturing. Sundin et al. (2005) presented several examples of remanufacturing process and its benefits to business and society. Financial incentives offered to holders of the product or repurchase campaigns, as reported by Klausner and Hendrickson (2000) influence the amount of returns. The understanding of issues related to the food chain, as well as the use of coordination and communication schemes integrated along the food value chain are still underdeveloped, despite the needs (eg, monitoring and tracking of the entire chain, access to quality information, online monitoring of the product flows (Reiche, 2011). It is noted frequently in literature that the effects of learning can be significantly higher if the members of a supply chain are in agreement with a common strategy (Manuj and Mentzer, 2008). Companies, according Wittstruck & Teuteberg (2011), should endeavor to better understand the sustainability criteria that influence customer product selection decisions. The supply chains should try to meet these same criteria and communicate effectively with customers, particularly through a strategic joint advertising that can highlight the joint activities of the supply chain partners.

H3: Companies show difficulty in assessing the costs related to the implementation of a RLS, and have not prepared technologically to cooperate with it.

Customers have also an essential role in reverse logistics, mainly because they are the first link in the chain and reversely exert a high environmental pressure on companies (Beaulieu, 2000). Thus, the first step in achieving the objectives is to establish a supply chain, where cooperation of all members is based on trust, efficiency and long-term commitment (Towill, 2005). In other words, companies must align their internal processes with sustainability standards (Beckman et al., 2009).



Companies have focused the reverse logistics operations in environmental motivations (Rogers and Tibben - Lembke, 1999). According to Porter and van der Linde (1995), a greater concern with the environmental issue can generate two types of innovation in the company: in processes and products. In general, it is perceived by companies that to manage the value chain in a sustained manner in the environmental sphere (Green Supply Chain) can promote efficiency and synergies between business partners, leading to minimization of waste and lower costs. However, organizations will only adopt the practices of Green Supply Chain Management, if indeed they identify the results in the financial or operational phase and the benefit in the improvement of performance which is an economic competitive advantage (Sarkis et al., 2010). The long-term demand for innovations to meet environmental standards and the pursuit of alternative materials may provide cost reduction (Wilkinson et al., 2001).

H4: Environmental issues and sustainable development are not the areas of greater investment by business.

The regulations required are credited and have influence on the reverse logistics activities of the company (Carter and Elram, 1998). The attention given to sustainable development operations has also been very important (Guide et al., 2003). Companies engage in recycling and remanufacturing processes, based on the laws of their country or for economic reasons. In Europe, the recycling of materials is driven by legislation and by the equipment manufacturers, who are responsible for collecting their products at end of life term. There are, however, several companies in the US and other countries who are legally required to collect back their products, although they do this in order to receive economic benefits of this process through remanufacturing.

As a result of the implementation of environmental legislation, many manufacturers around the world have taken the responsibility for their products at end of life term. Strategic development together with suppliers that integrate environmental concerns, has become a frequent issue, and constitutes a significant element of the successful application of innovative technologies (Geffen & Rothenberg, 2000), which contribute to improving food quality. Any deficiencies in safety or food quality in companies in early stages of the chain could negatively affect the markets or even lead to complete failure in the market. Food scandals such as the BSE scandal and others provide ample proof of this (Bredahl et al., 2001). As a result,

improvements in processes and communication systems that is truly successful should not be isolated, but accepted by the industry.

H5: Companies are concerned about compliance with the legislation in terms of environmental protection and food quality.

EMPIRICAL RESEARCH AND METHODS

The following analysis aims to (1) contribute to a better understanding of the implementation of reverse logistics systems, this is, the use of its applications, classifying them and analyzing them from the business point of view of specific sectors such as wine and olive oil production; (2) understand the size of implementation of these systems in the companies in these two sectors (3) understand what the real potential of these reverse logistics systems is in the strategy of companies; (4) analyze the future trends of companies with respect to the implementation of a RLS, (5) understand how the companies in these two production sectors deal with the expenses inherent to implementing a RLS (6) understand how these companies deal with compliance with the legislation in terms of environmental protection and food quality as well as to sustainable development.

This point is discussed in detail the methodological approach adopted in order to substantiate, in the business context, the theoretical concepts presented in the preceding paragraphs. The objective of this study is to analyze the state of the art of implementation of a Reverse Logistics System (RLS) by companies with olive oil and wine production activity in the Alentejo, Management, takes into account everything surrounding this process, particularly with regard to the usability of supporting technologies such as e-mail, Internet, videoconferencing and electronic data entry (EDI). It is also important to know what is the degree of knowledge in companies and their employees that have a RLS and also try to understand whether the business investment in technologies that enable remanufacturing of wine / olive oil recovered to new batches is or is not suitable. Knowing the importance that global organizations attach to matters of environmental protection and food quality, the study tried to direct the questionnaire for these areas in order to know the reality of these companies in these areas. The study tried to find out if the enforcement of legislation on environmental protection and environmental quality are part of the daily practices of these companies. For a better definition of these objectives it was chosen to determine the hypotheses that try to answer the question, presented in the previous section.

The research is classified as descriptive and exploratory, Gil (2009) as it relates to practical aspects that allow an interpretation of the data collected. The design of this, started from previous studies, based on literature, reading texts and analysis of other documents and opinions, but an investigation cannot be based only on the bibliographic domain, therefore, the data collected for this study was obtained through a survey or inquiry, following the principles applied to the collection of such data (Raupp & Beuren, 2008; Gil, 2009). The survey “has two purposes: (1) to describe the characteristics and (2) measure certain variables of two business sectors” in the case of this research: companies in the Alentejo region producing wine and olive oil, not looking for statistical evidence but a trend analysis. This study uses the following methods of multivariate analysis: exploratory factor analysis (EFA), confirmatory factor analysis (CFA), parallel analysis (PA) and discriminant analysis (DA). EFA, CFA and PA allow us to evaluate the hypotheses.

The implementation of EFA with varimax rotation on the set of ten questions about investment in areas of environmental law and sustainability and enforcement of legislation in terms of environmental protection and food quality, allows reducing the dimensionality of the proposed instrument (Hair et al., 1998; Reis, 1997). The calculation of this statistic Kaiser-Meyer-Olkin (KMO) and Bartlett’s test results establish that use of the EFA this search is possible. The statistical KMO is a ratio which varies between 0 and 1, and should be at least 0.7 in order to be acceptable EFA. Bartlett’s test examines whether the variable correlation matrix is significantly different from the identity matrix. The use of EFA is appropriate if the test rejects the null hypothesis that these matrixes are equal. The Cronbach’s Alpha coefficients assesses the reliability of the final factors that result from the EFA.

The CFA evaluates psychometric properties of factors in terms of reliability and validity, based on software package AMOS 6. Initially EFA defined the model that CFA needs to associate the latent factors to the observed data (observed variables). Given the lack of normality of the data, this analysis uses the estimation method of weighted least squares (Schumacker and Lomax, 1996).

The overall fit model analysis is based on three types of measures: absolute fit, gradual adjustment and in parsimonious form (Hair et al., 1998). The adjusted absolute evaluation adopts the chi-square goodness-of-fit test, the goodness of fit index (GFI) (Jöreskog and Sörbom, 1986) and the root-mean-square error of approximation (RMSEA) (Steiger, 1990). The chi-square test is a general

indicator of how well the estimated model fits the data. The chi-square value should be low and not statistically significant to achieve adjustment quality. Likewise, GFI needs to exceed 0.9 (GFI range of 0 to 1 where reach a perfect adjustment) and RMSEA should be low (zero suggests a perfect adjustment), considering values near to 0.06 or less (McDonald; Ho, 2002), but can be accepted until 0.10 (Browne; Cudeck, 1993; Bentler, 1999). This index and commonly reported with its confidence interval and PCLOSE, must not be significant.

The interpretation of the CFA results follows by an assessment of the reliability. The reliability analysis refers to the fact that the observed variable is chosen to measure each latent variable (ie, each factor). Then, the analysis focuses on the evaluation of convergent and discriminant validity of each latent variable. Convergent validity assesses whether the observed variables actually measure the corresponding latent construct. The significance and size of observed variables and their weights permit this type of evaluation (Bollen, 1989). The discriminant analysis focuses on whether there is a strong correlation between the latent constructs (which indicates poor discriminant validity) or weak correlations (suggesting strong discriminant validity). Within the CFA method, the matrix of normalized correlations between latent variables allows us to evaluate this type of validity.

Quantitative Analysis. Interviews and Survey

In preparing the questionnaire, were used “closed”(structured) questions, R. Ghiglione. B. Matalon (1996), Murphy and Poist (2003), Murphy et al. (1996), González-Benito et al. (2006), Beamon (1999), Manual of the European Commission (2005), Wu and Dunn (1994), Quivy, Raymond and Campenhout (1992), Malhotra (2002). The wording of the questions was carried out in a clear and objective manner, avoiding the inclusion of questions with double meaning or that are promoted misconceptions, like this avoiding that the respondent provide the answer you expect to be the most correct and appropriate. Still, questions were avoided which could promote the duality in its interpretation and that could lead to answers that did not correspond to what was intended to ask. The issues discussed relate directly, and only to the problems set out in the research and the objectives associated with this topic of study.

The questionnaire consists of 20 questions. The first nine relate to the characterization of the type of worker and company: Name, company name, position he holds in the company, email address, production sector, there is a RLS, public



establishments number where the company exercises its activity, number of employees working for the company, existence of supporting information systems to logistics activities of the company. The five following questions are intended to characterize the companies and the supporting technologies they use and the last six questions are intended to assess the costs involved in implementing an RLS as well as identify which areas are of greater investment by businesses in relation to the environment and development sustainable and even assess whether companies are concerned with the enforcement of legislation in terms of environmental protection and food quality.

The purpose of the survey was to try and help to realize the advantages of the implementation or not of a reverse logistics system, and that determined this choice by companies with wine and olive oil production activity in the Alentejo region. The survey, available online, was presented via e-mail to 216 companies, with oil / wine production activity (108 wine sector and 108 in the olive oil sector) in the Alentejo region, it has obtained 68 answers Valid (32.4%).

RESULTS AND DISCUSSION

In order to show evidence of validity and reliability of the scale of attitudes to a RLS (all values are on a scale 1-7, with midpoint equal to 4, and the higher the value, the more favorable is the attitude) presents the results of the factor analysis, parallel analysis, Cronbach's alpha, interterm correlation and confirmatory factor analysis, to assess the hypotheses 1,2 and 3.

Factor analysis, Cronbach's alpha and correlation interterm

Prior to the interpretation of the factor analysis, there were the indexes of KMO = 0.767 and Bartlett's Sphericity test; $\chi^2 (6) = 19.733$, $p < 0.001$, which is favorable. Thus, there was made the factor analysis by principal axes (PAF), without rotation or set number of factors. The results of this analysis, along with the accuracy rate (by Cronbach alpha technique) the scale and univariate descriptive statistics are summarized in Table 1, which characterizes the type of company / employee before the existence of a reverse logistics system and supporting technologies used.

Table 1. Sample characteristics

Variables	Distribution of responses	
Position he holds in the company	Administrator/Manager: 27.3% Director: 16,9%	Other: 41,6%
Production sector	Olive oil: 62,3%	Wine : 26%
Is there currently a SLI in your company?	Yes: 15,6% Implementation plan of a SLI: 2.6%	No: 70,1%
Number of physical establishments where the company develops the business activity	1 establishment: 50,6% 2 establishments: 11,7% 3 establishments: 10,4%	4 establishments: 5,2% 9 establishments: 2,6% 12 establishments: 2,6%
Number of employees in the service of the company	≤ 2 : 10,4% 3 – 8: 27,2% 9 – 15: 19,4% 16 – 22: 6%	23 – 29: 2% 30 – 41: 4% 90 -250: 4%
Information systems that support the logistical activities	Yes: 57,1% The implementation is in progress: 2,6%	No: 28,6%
Use of supporting technologies	EDI Yes: 7,8% No: 22,1% Implementation plan: 22,1% Internet Yes: 41,6% No: 37,7% Implementation plan: 9,1% Intranet Yes: 5,2% No: 18,2% Implementation plan: 2,6%	E-mail Yes: 28,6% No: 28,6% Implementation plan: 7,8% Videoconference Yes: 45,5% No: 35,1% Implementation plan: 7,8%

As can be seen, the best solution was on the structure that has two factors. The examination of the obtained averages pointed out that the participants presented mostly moderately favorable attitudes towards implementation and knowledge of a RLS. The parallel analysis (PA) with 1,000 simulations and 99% confidence generated a second random own value of 1.12, a value that is higher than the second eigenvalue found in the factor analysis (1.04), indicating that the one-dimensional structure must be considered, so we carried out a new analysis by setting up a single factor. This analysis emerges one factor eigenvalue of 2.23, accounting for 56.90% of total variance and factor weights ranging from 0.37 to 8.88. The analysis obtained by Cronbach's alpha, confirms the internal consistency ($\alpha = 0.791$), thus it can be considered that the scale of precision is satisfactory.

Confirmatory factor analysis (CFA)

Simultaneously held GFA, took account of the covariance matrix method and used L (Maximum Likelihood) estimation in order to refine the previous analysis, which was more exploratory nature. The one factor solution with standardized weights is shown in Figure 1.

The CFA results demonstrate that the unifactorial model attitudes in relation to RLS satisfactorily fit the data: $\chi^2 (3) = 6.241, p > 0.05$; $\chi^2 / gl = 2.08$ GFI (Adjust Quality Index) = 0.99, CFI = 1 and RMSEA (square root approximation error of the mean) = 0.04 (90% CI = 0.00 to 0.14, PCLOSE = 0.486), with all weights statistically significant regression ($p < 0.001$).

Table 2. Items semantic differential type, factor structure, means, standard deviations and range accuracy rate of attitudes to a RLS

Contents	M	DP	Weights	Precision index
Not Known/know in depth	2,89	1,568	0,822	0,62
Not adequate/very adequate	4,00	2,058	0,976	0,804
With no preparation / Fully prepared	3,56	2,064	0,730	0,782
No one has implemented / implemented all	3,22	1,166	0,786	0,711
Number of items 4	4			
Eigenvalues	2,276			
	1,037			
% total variation	82,842			
Alfa de Cronbach	0,791			

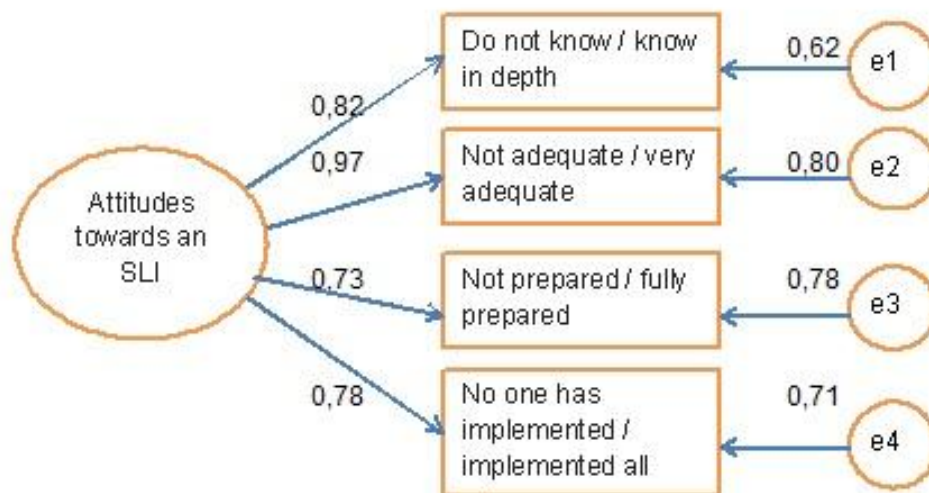


Fig. 1. CFA range of attitudes to a RLS



To assess the hypotheses 4 and 5 we will conduct new exploratory factor analysis. EFA allows reducing the original ten elements on two factors, both of which contribute to 82.84% of the total variance (KMO = 0.677; Bartlett test $p < 0.001$). Table 3 summarizes the main results of this analysis.

The observation of the elements with further charges higher weights for each factor justifies the corresponding chosen label. Factor 1, Environment and Sustainability, brings together elements related to environmental issues and innovation enterprises; value chain management in a sustained manner in the environmental sphere; waste minimization and reduction of costs. The factor 2 Reuse / Expense an RLS includes other elements such as aspects related to wine reuse rate / olive oil batch I, the percentage of wine return / oil and also the difficulties in determining the total expense of an RLS.

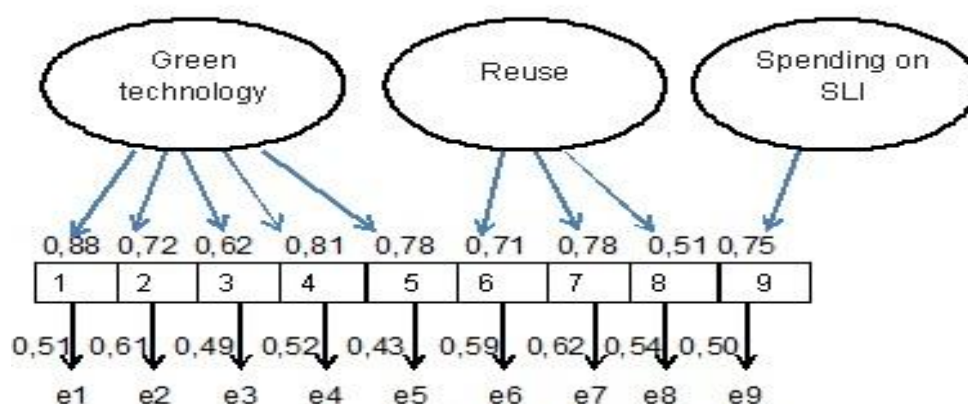
The high Cronbach’s alpha coefficients for each factor suggest that they have a very good level of internal consistency.

Figure 2 shows the standardized estimates of the CFA model. In regard to the evaluation of the fit (in terms of absolute adjustment), the Chi-square statistic presents a low value and is not statistically significant ($p > 0.005$), suggesting that the model adequately describes the data. The remaining global adjustment measures also show favorable results, indicating an appropriate gradual adjustment. GFI exceeds 0.9 and RMSEA is near zero, and the normalized chi-square is in the range 1 to 5.

To the latent variable Environment and Sustainability, the set reliability coefficient is 0.72 and the extracted variance is 0.56. For reuse and expenses of a variable RLS, the reliability measures are 0.78 and 0.50 and 0.83 and 0.52 respectively. For

Table 3. Customer service elements (CSE) and factors (After varimax rotation)

Factors	Loadings	% of Explained Variance and Cronbach α
Factor 1 - Environment and sustainability		
Orientation towards green products.	.867	49,92%
2. Concern with the aspects of environmental sustainability.	.821	Cronbach $\alpha = 0.842$
3. Investment in “green technology”.	.808	
4. Investment in environmental certification.	.798	
5. Implementation of an energy efficiency system.	.700	
Factor 2 - Reuse / expenses of a SLI		
6. Percentage of wine / olive oil returns	.862	32,91%
7. The total expense of a SLI is high compared to the current situation of the company	.776	Cronbach $\alpha = 0.776$
8. Reuse rate of wine / olive oil in new batches	.720	
9. Difficulty in determining the total expenditure of a SLI	.705	



Note: Chi-quadrado = 60.4 ($p = 0.08$), GFI = 0.95, RMSEA = 0.04, AGFI = 0.91, CFI = 0.96.

Fig. 2. Confirmatory factor analysis. Standardized estimates

the three latent variables, these values exceed the threshold of 0.7 in terms of reliability and are equal to at least 0.5 in terms of variance extracted. These results support the findings of the EFA on the reliability of factors, based on the Cronbach alpha coefficients. Figure 2 shows that all variables have positive weights noted above the minimum acceptable level 0.40 (Hair et al., 1998). All weights are statistically significant (t test: $p = 0.000$). In terms of the discriminant validity by observing Figure 2 it is noticeable that the level of correlation between the latent variables is 0.51. This correlation is fairly high, indicating a correlation between the three latent variables, although the correlation is not very strong (i.e., each captures a different perspective of the construct).

CONCLUSIONS

This article explores the importance of logistics activities in the companies that implement or not a reverse logistics system, and what factors contribute to this adoption.

By applying some multivariate statistical methods, this study shows that the effect of firm size, geographical dispersion, the existence (or not) of supporting information to logistics activities systems, technological investment and the economic value of remanufacturing and legislation have great influence on the decision and implementation capacity of RLS.

The results of the PC analysis indicate that over 50% of the total variance of the construct is explained with meritorious internal consistency - in accordance with the classical theory of the tests (accuracy - Anastasi & Urbina., 2000; Hair & Colis, 2006; Pasquali, 2003). The CFA brings additional evidence for the one-dimensionality of the scale, showing the quality of fit of the model that supports the measurement. Indeed, the setting adequacy ratios correspond to the number shown in the area (Byrne, 1989; Hu & Bentler, 1999), or are very close, specifically the RMSEA (Hu & Bentler, 1999).

Previous studies in logistics identify the importance that companies are technologically prepared and equipped in order to provide an adequate level of customer service. The first theoretical contribution of this paper is to explore this issue in the specific context of reverse logistics in order to ascertain whether these companies and their collaborators are technologically prepared to cooperate in RLS. The EFA and CFA that were the subject of this study show that companies are concerned about aspects of environmental sustainability and that there is a guideline for

companies when it comes to green products and desire to implement energy efficiency systems (aspects that clearly define the factor 1). The economic value of remanufacturing wine/olive oil recovered to new batches, i.e., reuse (factor 2) is clearly explained by the percentage of wine/olive oil that is returned. This analyzes also show that this type of company finds it difficult to calculate the costs associated with RLS.

Overall, this study proves that companies in these two sectors of production are sensitive to various elements that are crucial in implementing (or not) of a reverse logistics system, and in particular being technologically advanced.

The size of the company and the geographical dispersion, are fundamental in a market economy present-day. These companies being situated in a region are disadvantaged in the economic landscape, and their production costs are not competitive which means that better location implies lower costs. To maximize profit means minimizing production and transportation costs in order to maximize revenue. The performed analysis showed that most of these companies do not have an RLS implemented or an economic structure to do so.

Favorable evidence of construct validity and reliability has been verified to the attitudes to a range RLS. The Factor structure was verified and also a very high internal consistency. One can therefore recommend the use of this measure for research that aims to find out more about the attitudes towards an RLS. For this purpose, you can search several variables, such as the suitability of investing in new technologies, degree of knowledge of a RLS and cooperation in RLS. It appears that companies are not prepared to cooperate in RLS technology, especially at the level of required investment in technologies that enable remanufacturing of wine and olive oil recovered to new batches. It cannot predict whether the implementation of a RLS on the part of these companies in the short term will be done, but it is certain that talks about this need have already begun.

Thus, it can be concluded that in terms of usability of supporting technologies by businesses is visible that technological investment has changed the way of communication, adapting to new technologies, changing relationships, business involvement and its employees. By presenting the data analyzed above, we note that companies in these sectors of production and their employees are somehow within the panorama of this new reality. They know the tools and know how to use them.



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