

TAX EFFICIENT SUPPLY CHAIN

Joana Patrícia Costeira Borralho

Project submitted as partial requirement for the conferral of
Master of Science in Business Administration

Supervisor:
Prof. Doctor Eurico Brilhante Dias, Adjunct Professor, ISCTE Business School,
Department of Marketing and Logistics

September 2014

CONTRA-CAPA

ABSTRACT

This case started with the following question: How supply chains and tax policy interact?

This question was the starting point for this study and was developed under the areas of Logistics and International Tax Policy.

In order to support this study, the adopted methodology was the selection of a Multinational company – LPR Portugal – which has the transportation and distribution in the European Union as a scope of service and the customer satisfaction as the main value. LPR is a market leader, with business in 12 countries of European Union and also has subsidiaries in 8 countries. It is established in the market for more than 15 years, with a good market consolidation and high reputation.

The study of LPR, as a case study, will allow a better understanding of the situation of an international company in terms of logistics and international policy.

During this study, qualitative data were used and obtained through LPR Portugal and EY Portugal. The results from the data shows that supply chain management and international tax policy are not a well developed topic.

As short, this study requires a reflection about how logistic and tax policy interacts, taking into consideration the international perspective.

This study presents as a useful and practical tool by collecting questions that will allow a better understanding and analysis of the problem.

Keywords: Globalization; Logistics, International Tax policy

ABSTRATO

O presente caso de estudo teve como ponto de partida a seguinte questão: Como é que cadeia de abastecimento e a fiscal interagem?

Esta questão serviu como ponto de partida à elaboração deste estudo e foi desenvolvida no âmbito da Fiscalidade e da Logística.

A metodologia adoptada baseou-se na selecção de uma multinacional portuguesa, a LPR, que exerce uma actividade na área de transporte e de distribuição em toda a União Europeia, e que tem como principal valor, a satisfação do cliente. A LPR é uma empresa líder de mercado, está presente em mais de 12 países e têm filiais espalhadas por 8 países. Está presente no mercado há mais de 15 anos, uma boa consolidação de mercado e uma elevada notoriedade.

O estudo da LPR, irá permitir uma maior compreensão da realidade de uma empresa internacional e os seus problemas em termos fiscais e logísticos.

A análise do presente estudo integrou dados qualitativos, que foram obtidos através da LPR Portugal e da EY Portugal. Os resultados dos dados demonstram que a implementação de uma cadeia de abastecimento que tenha em consideração a política fiscal internacional ainda se encontra numa fase embrionária.

Em suma, o estudo apresentado exige uma reflexão sobre a forma como as áreas de logística e fiscalidade estão relacionadas, tendo em conta, a realidade internacional. Este estudo apresenta-se assim como um instrumento útil e prático, sistematizando questões que permitam a consolidação dos conhecimentos e o desenvolvimento da capacidade de análise.

Palavras chave: Globalização, Logística, Fiscalidade

ACKNOWLEDGEMENTS

In the overall path conducted to finish this project I received support from some people that I would be grateful to take this opportunity to thank them.

I would like to acknowledge and express my gratitude to Professor Eurico Brilhante Dias for all the patience, availability and support during the preparation of the case study, which was crucial for its completion.

All the study case was supported by a deep help from EY Portugal and LPR collaborators, specially Dr. Flávio Guerreiro.

Finally I would like to thank to my family for the support during this process.

TABLE OF CONTENTS

1. Introduction	10
2. Literature Review	12
2.1. Logistics and Supply Chain Management.....	12
a) Supply Chain Management over the world.....	14
2.2. Indirect Taxes	16
2.2.1. Value Added Taxes.....	17
2.2.1.2. The Overall Trends of VAT in the world	20
2.2.1.3. Jurisdiction of the VAT system.....	20
2.3. Supply Chain Management and Indirect Taxes.....	22
2.4. Tax Planning.....	23
3. Methodology.....	25
3.1. Research Seating.....	26
3.2. Data Collection	26
3.2.1. Interviews	26
3.3. Data Analysis.....	27
4. LPR Case Study.....	28
4.1. Cross-case analysis	31
4.1.1. Acquisition of Pallets.....	31
4.1.2. Service provider.....	31
5. Discussion and results.....	34
5.1. Main problems identified	34

5.2. What should have been done.....	34
5.2.1. Implementing a tax strategy and planning	35
5.2.2. Restructuring of their Supply Chain.....	38
5.2.3 Lessons Learned	41
6. Conclusions	43
6.1. Limitations and Future Research.....	45
Bibliografia.....	47
Annexes.....	51

INDEX OF FIGURES

Figure 1: Tax Structures in OECD area.....	18
Figure 2 Main Tax categories, quarterly data, seasonally adjusted % of GDP.....	19
Figure 3 Average VAT rate in European Union and in OECD.....	19
Figure 4 Structure of Revenues	20
Figure 5 LPR business structure.....	29
Figure 6 LPR Business activities.....	30
Figure 7 LPR VAT cash flows	31
Figure 8 LPR VAT cash flows and logistical flow.....	32
Figure 9 LPR VAT cash flows in a intra-community transaction.....	33
Figure 10 Business Modelo of LPR.....	36
Figure 11 Scenario 1	36
Figure 12 Scenario 2	37
Figure 13 Reorganization of LPR physical full.....	37
Figure 14 The Overall system	39
Figure 15 Tax Restructuring.....	41

INDEX OF TABLES

Table 1 Main Dimensions, areas and goals of the Case Study.....	25
Table 2 Interviews Categories	28
Table 3 Impacts of Scenario 1 and 2.....	38

ABBREVIATION LIST

AICEP - Agência para o Investimento e Comércio Externo de Portugal

BT – Business Taxes

EY – Ernst & Young

EU – European Union

GDP – Gros Domestic Prodt

GST – Good and Service Taxes

MS – Member States

OECD – Organization for Economic Co-operation and Developement

SCM – Supply Chain Management

US – United States

VAT – Value Added Taxes

1. INTRODUCTION

International tax and supply chain planning are frequently viewed as unrelated activities. Supply chain managers and tax directors have different proficiencies and their reporting relationships differ. Supply chain managers, and is staffed by supply chain and manufacturing analysts. In contrast, tax is a staff activity, the department typically reports to the Chief Financial Officer, and tax departments employ tax attorneys and tax accounts. As a result, these departments may not collaborate, at least historically. Thus supply chain and income tax decisions were often made by different organizations operating independently.” (Webber, 2010)

Historically, a legal/fiscal perspective and supply chain management have not been taken as correlated topics. Based on this, the main reason why I started this study is to show that with the new market trends there is a link between tax policy and efficient supply chain management and this can be an opportunity to decrease tax burden.

The main objectives of the present study are:

- Identify and explain which are the main reasons for logistics and tax policy be managed together;
- Identify the advantages that may arise from the correlated management;
- Prove that if tax decisions are being taken by non-tax professionals at different levels of the supply chain, additional and unnecessary costs are likely to be added to the final cost of the product.

Based on the above, the present study contributes to the understanding of logistics and tax policy, and how they are correlated, by providing empirical-based explanations.

The idea of this study is to analyze the methodology applied in a real case, LPR, which is a company operating in the global market and it is one of the most important players in the pallet pooling sector. This case is based on qualitative research and points out the perspective of LPR on logistics and tax policy. Nevertheless, and in order to obtain a more broad perspective it was also used the outlook of tax professionals of EY Portugal that are currently implementing tax planning in the supply chain.

By doing this, it was possible to understand that a tax strategy will allow companies to be more successful and cost efficient in the long-term. However this perspective sharply contrasts with LPR vision about this matter.

In the following section, it will be presented the theoretical background and afterwards it will be analyzed LPR from a set of different perspectives as:

- Scope of services
- Role in the global market
- What have been made in the last few years in terms of tax policy
- What should be done differently
- Opportunities/Advantages in implementing a tax policy

Finally, the study will be concluded by presenting research limits and implications.

2. LITERATURE REVIEW

2.1. Logistics and Supply Chain Management

Logistics is a well-known concept that has been implemented in several different tasks in the last centuries (i.e. in the construction of the pyramids in the Egypt, in both world wars). However, it was only in the last two centuries that managers have been recognizing the positive impact that logistics management can have in the competitive advantage of their companies.

Historically logistics is a concept that have been evaluating in the last few years, at first it was seen as a new function – independent function – integrating with the existing ones, at first as the distribution, then the supplying and finally at the manufacturing process. At a second phase we have he “integrated logistics”, the aim of this system was optimize the goods flow, starting from the origins and ending with the final destination. At these days **Logistics** can be defined as “*the process of strategically managing the procurement, movement and storage of materials, parts and finished inventory (and the related information flows) through the organization and its marketing channels in such a way that current and future profitability are maximized trough the cost-effective fulfillment of orders*”¹. In other words logistics is simply a plan for the flow of the product through a business.

a) *Important concepts in Logistics*

Logistics have the capability to deliver value to customers by creating a total availability – product on time, in the right place and in the right quantity – once a company is able to deliver value by using the three service dimensions is also able to reduce inventory, increase sales and reduce operations variations.

In order to better understand the logistics concept there is some figures that should be pointed out: (H., 1999)

¹ Cristopher, Martin (2005) “*Logistics and Supply Chain Management*” 3rd Edition

- In order to create value managers need to understand the availability features: *time utility* – value created by making something available at the right time – *place utility* – value created or added by making the products available for purchase or consumption in the right place – *quantity utility* – value created by making the product available at the right quantity – and at last *post-production from utility* – are the postponed activities which gives customers the ability to adapt products and services to hi personal taste.
- Logistics management, is an integrating function which coordinates and optimizes all logistics activities, as well as, integrates logistics activities with other functions, including marketing, sales manufacturing, finance and information technology.
- Logistics effectiveness and efficiency are achieved through punctuality and timeliness in delivering the product
- Logistics as support to supply chain
- The moving operations – via road, track, air, water, pipe, cable – imply a matching of private sources (entrepreneurial and professional) and environmental ones (soil, air, energy, landscape), which are only partially handled by logistics, thus leaving wide room to the policy maker decisions.

2.1.1. Supply Chain

Nowadays with the rapidly changes of the environment, the competitiveness of international companies is highly related with their ability to deliver customized products, quickly and timely all over the world. Therefore the competition is no longer in the production process, but in the supply chain².

According with Handfield & Nichols (2002) the **supply chain** “*encompasses all organizations activities associated with the flow and transformation of goods from the raw materials stage, through the end user, as well as the associated with the flow and transformation flows. Material and information flows both up and down the supply*

² Jespersen, Birgit and Skjottarsen, Tage (2005) “*Supply Chain Management: in theory and practice*”

*chain.” and the **supply chain management** (SCM) “is the integration and management of supply chain organizations and activities through cooperative organizations relationships and activities through cooperative organizational relationships, effective business processes, and high levels of information sharing to create high-performing value systems that provide member organizations a sustainable competitive advantage”.*

In the last few years several definitions of SCM have been introduced in the literature, Christopher (2005) states that “*Supply Chain Management is the management of upstream to downstream relationships with suppliers and customers to deliver superior customer value at less cost of the supply chain as a whole*”.

In today’s highly competitive markets, we are assisting to a dramatically change in the international trade. In the early 1990’s, the global trade was dominated by the developed nations and now they only accounted for around 60% of global merchandise exports, new markets are opening, new trade routes are being created, china is now one of biggest economies in terms of exportation (Alan E. Branch 2009).

Hence, companies are now recognizing that aligning the logistics management with the supply chain management is a source for a major competitive advantage. The main goal of companies is not pursuing a higher market share in order to achieve higher profitability, since this is no longer enough, now they are pursuing different goals as lifetime relationship with their customers and that can only be achieve through high levels of customer service (product availability, timeless and consistency of delivery, and ease of place order) and from differentiate itself from its competitors.

a) Supply Chain Management over the world³

With the globalization we have been assisting to a continuously liberalization of trade and nowadays companies are producing to all over the world and they have realized

³ Li, Ling, “*Supply Chain Management: Concepts, Techniques and Practices*” (2007), World Science Publishing Co. Pte. Ltd.

that, they have to be part of the global supply chain and for that they need to know how the trade works in the other countries.

The **United States** have been the pioneering's in developing supply chain models, Wal-Mart is one of the most successful companies in this area and it is a case of study all over the world. One of the main characteristics of the US supply chain is the well-developed transportation infrastructure, they have a sea and air transportation that are prepared to handle the flow of importations and exportations and in terms of rail and road, the infrastructures are sufficient to connect all the activities within the supply chain. Another aspect of the US Supply Chain is the availability of the technology to all the stakeholders.

The **European Union** countries were the first ones to make efforts to unify the continent and create a liberalize trade. Despite this, there are several problems that they have to deal with, as the major differences in local markets, culture, legal regulations, politics, taxation requirements, economic development, wealth, and geography. Another important point is the transportation infrastructure that varies from country to country. Each country has their own specifications in terms of geography and the type of distribution networks that is more functional for them internally. However, they have other problems as poorly maintained infrastructures, differences in rail gauge size, technical standards, and height/width allowances. All this aspects have been the main reason why the European Union does not have a unify SCM.

The SCM in **Asia** is the less competitive when we compare it with the last two, in Asia there are also problems related with culture, political and legal systems, and different levels of development (countries like Japan, China, India, Australia, Indonesia, South Korea and Thailand that are highly developed contrast with others that have a very low level of development). In recent years we have been assisting to a rapidly improvement in terms of rail, air and highway transportations and in other areas, in order to create a more efficient supply chain all over the Asian countries, but despite this their transportation infrastructure are less developed than the ones that exist in Europe and in the US.

In **Latin America**, one of the major problems in terms of SCM is the inefficient networks of technology, which makes it difficult to automate supply chains and reliably monitor inventory as it passes from one link to another.

2.2. Indirect Taxes

Indirect Taxes is a “*wide range of taxes levied on the production, sale and international trade in goods and services, including Value Added Taxes (VAT), Goods and Services Taxes (GST) and single-stage taxes*”⁴.

According with the definition presented above, there are three principal types of indirect taxes; the VAT system, GST system and one single-stage taxes.

The **VAT system** is currently spread all over the world and consists in applying three different rates - the standard, reduced and intermediate - to different types of goods. Articles 96 to 99 of VAT Directive 2006/112/EC of November 38, 2009 defines that the European Union countries cannot have a standard rate lower than 15% and the reduced rate cannot be lower than 5%.

The **GST system**, is applied at each point in the supply chain, and levied equally on goods and services supplied. Nowadays is implemented in Australia, Canada, New Zealand, Egypt and Singapore. The Central Government of India has proposed the implementation of the GST system, in order to simplify their current system that consists in indirect taxes levied in state and national levels⁵.

The last system is the **single-stage taxes**, that is implemented in China (with the name of Business Tax - BT -) and in the United-States, where each state applies their own consumption taxes, most of which are single-stage taxes on the sale of goods. This system is characterized by the fact that it can be implemented at any stage of the economic circuit, including production, importation, distribution and retail sales. Since single-stage taxes may apply at multiple stages, it can create a cascading effect (as taxes paid at an earlier stage from part of the taxable base) that leads to very high effective rates.

⁴ EY report, Managing Indirect Taxes in the Supply Chain (2013)

⁵ EY report, Indirect Taxes 2013, p. 12 and 13

This thesis will focus on Value Added Taxes system, since it is implemented in the majority of the countries.

2.2.1. Value Added Taxes

The Value Added Taxes (VAT) is *“a general tax on consumption (becoming payable every time an article of merchandise or service is supplied), in multi-phase form, because it is paid at all points on the economic circuit without cumulative effects”*⁶.

This type of taxes is one of the most successful in the “world of taxation” and the most important development in taxation in the last century.

It was invented on 1954 by Maurice Lauré, the joint director of French tax authorities, and it was implemented in France in that year, through the Decree-Law n.º 394-B/84, of 26 December.

The VAT’s expansion was limited to less than 10 countries in the late 1960s⁷ and its implementation on Europe it was driven by the fact that it is a prerequisite for membership of the Europe Union - reason why Portugal implemented in January 1, 1986 -. In the last century, its spread has accelerated and nowadays has been implemented in more than 150 countries. Several countries like Russia, Korea, Indonesia and Fiji Islands have created there VAT systems through the European Model.

The main reason why VAT has been a broadly accepted indirect tax across the globe, is the fact that it often accounts for one-fifth of the total tax revenue and it is globally one of the most important sources of revenue for governments (see figure 1) behind social security, but far above corporate income tax, specific consumption tax and property tax.

The capacity of VAT to generate revenue through a neutral and transparent way had led the majority of OECD member countries to adopt this consumption tax, the only one that is an exception is the United States. Some authors suggest that “VAT is the most

⁶ Palma, Clotilde Celorico (2008), “Introdução ao Imposto Sobre o Valor Acrescentado”, N.º 1 – 3ª Edição.

⁷ Stéphane Buydens, Consumption (2008), *Tax Trends*, OECD Publishing p. 23

effective instrument for generating government revenue”⁸ and its marginal cost is lower than it would be if other taxes were used.

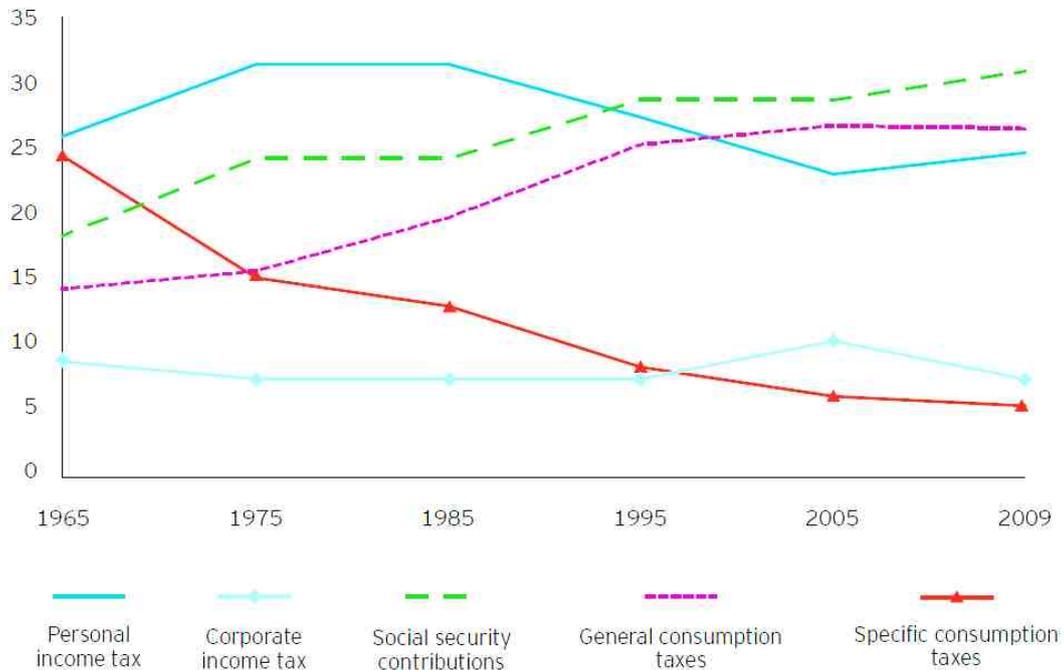


Figure 1: Tax Structures in OECD area⁹

2.2.1.1. The Overall Trends of VAT in the European Union

According with the report “Taxation trends in European Union” published by the Eurostat, the high levels of Taxes in the European Union (EU) countries is not a new trend, it dates from 1970s and the main reason for that is extensive role of the public sector.

In realty the high levels of taxes continuously increased until the end of 20’s century, being driven by the crises the late 1990s. During the first decade of the 21’s century the tax levels decreased, until 2010 when the absolute tax revenues increased once again. As we can see the tax level in EU countries are driven by the economic crisis, since this is the main reason why government tax revenue varies from year to year.

⁸ Charlet, Alain and Owens, Jeffrey (September 20, 2010), *Tax Notes Int’l* p. 943

⁹ Percentage share of major tax categories in total tax revenue.

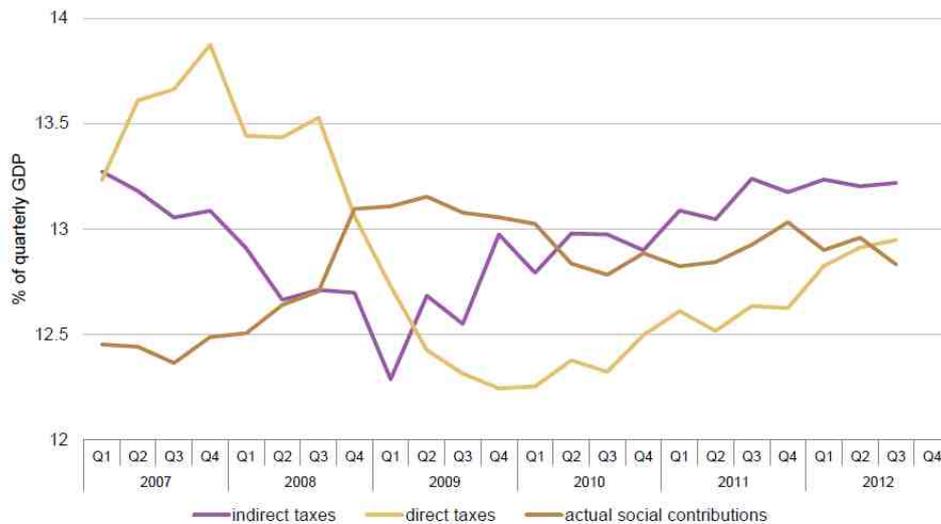


Figure 2 Main Tax categories, quarterly data, seasonally adjusted % of GDP

It is important to point out that since the economic crisis started (third quarter of 2008) the social contributions had a substantial decreased and in contrast the indirect taxes had been continuously increasing, in 2009 the indirect taxes were 10,7% of GDP and in 2011 it was 11,2%, this was mostly due to increases in VAT rates, resulting in higher VAT revenues (see Figure 3) and this trend it will continue in the next few years since Cyprus, Czech Republic, France and Slovenia have already increased their rates and announced increases for 2014.

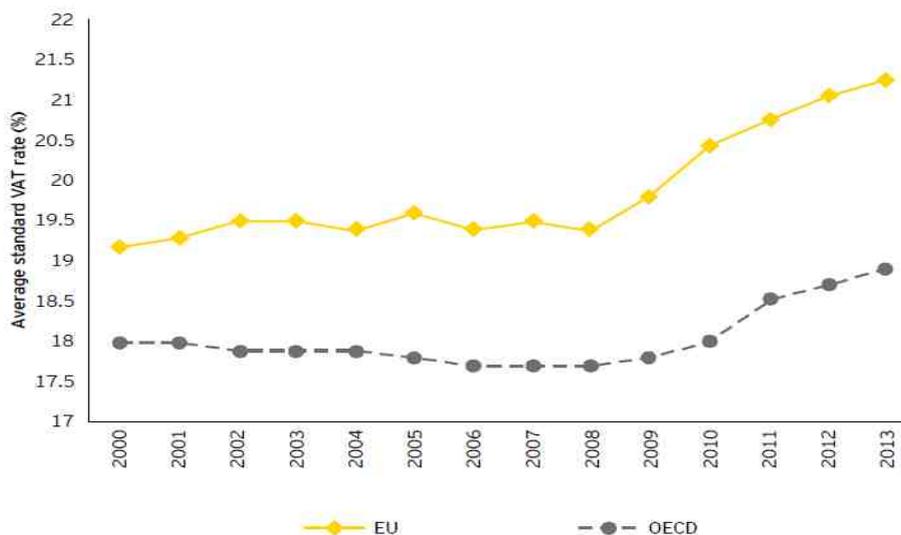


Figure 3 Average VAT rate in European Union and in OECD

In the specific case of Portugal the VAT had always a significant role in government's budgets, as we can see on Figure 4.

PORTUGAL	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2011	
A. Structure of revenues	% of GDP												Ranking¹⁾	€ bn
Indirect taxes	13.5	13.5	14.0	14.6	13.9	14.7	15.1	14.8	14.3	13.0	13.7	13.9	14	23.9
VAT	7.6	7.5	7.6	7.7	7.7	8.4	8.6	8.5	8.4	7.1	7.8	8.3	10	14.2
Excise duties and consumption taxes	2.6	2.8	3.0	3.2	3.1	3.0	3.1	2.8	2.7	2.7	2.8	2.8	18	4.7
Other taxes on products (incl. import duties)	2.7	2.6	2.5	2.3	2.4	2.6	2.7	2.7	2.4	2.2	2.2	2.0	5	3.3
Other taxes on production	0.6	0.6	0.9	1.3	0.7	0.7	0.7	0.8	0.8	0.9	0.8	0.9	17	1.6
Direct taxes	9.6	9.1	9.1	8.5	8.3	8.3	8.6	9.5	9.7	9.0	8.8	9.9	16	17.0
Personal income	5.3	5.4	5.2	5.2	5.0	5.1	5.3	5.5	5.6	5.7	5.6	6.1	15	10.5
Corporate income	3.7	3.3	3.3	2.8	2.9	2.7	2.9	3.6	3.7	2.9	2.8	3.2	6	5.5
Other	0.5	0.5	0.6	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.6	18	0.9
Social contributions	8.0	8.2	8.3	8.6	8.3	8.4	8.4	8.5	8.8	9.0	9.0	9.3	18	15.9
Employers'	4.7	4.8	4.9	4.6	4.6	4.7	4.5	4.8	4.9	5.0	5.2	5.3	18	9.1
Employees'	2.8	3.0	3.1	3.4	3.2	3.2	3.6	3.5	3.5	3.6	3.5	3.7	11	6.3
Self- and non-employed	0.4	0.4	0.4	0.5	0.4	0.5	0.3	0.2	0.3	0.3	0.3	0.3	20	0.6
Less: amounts assessed but unlikely to be collected	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.		
TOTAL	31.1	30.8	31.4	31.6	30.5	31.4	32.1	32.8	32.8	31.0	31.5	33.2	17	56.8

Figure 4 Structure of Revenues

By analyzing the structure of Portuguese Revenues through taxes, it is possible to conclude that, between 2010 and 2011 the revenue obtained with VAT increase from 7,8% to 8.3%, this increase it was mainly due to an increased in the VAT rates (standard, intermediate and reduced). Additionally, it is also possible to see that the proportion of Portuguese VAT in total taxation is the tenth highest of the EU.

2.2.1.2. *The Overall Trends of VAT in the world*

According with EY report “*Indirect taxes in 2013*”, the trend all over the world is to increase the VAT rates, for example in Asia-Pacific this trend is not very explicit, but Japan decided to increased their rates from 5% to 8% in April 1, 2014 and to 10% in October 1, 2015. Thailand has also announced an increase in their rates from 7% to 10%, to 2014. By contrast in South American the VAT system has been relatively stable in the last few years and the trend is to continue like that.

2.2.1.3. *Jurisdiction of the VAT system*

Nowadays Global Companies need to know how the international trade works and for that, they need to understand indirect taxation.

When we are analyzing the relationship between the international trade and the indirect taxation we need to understand VAT jurisdiction, in this section will focus on two types of transactions: transactions within the EU Territory, commonly known as intra-community transactions, or transactions outside the EU territory, known as imports.

a) **Imports**

Transactions outside the European Union territory are commonly known as **imports** “*good or service brought into the national territory through a country outside the European Union*”.¹⁰

One of the key topics on imports is the rules that determine which country has the right to tax a particular supply that involves several jurisdictions, in these cases is commonly accepted all over the world that VAT is always due on the country of acquisition.

b) **Intra-community Transactions**

Are defined as the transactions that occur between countries of the European Union, the jurisdiction to this type of transactions is stipulated in the VAT Regime for the Intra-community transactions.

In this type of transaction when we have just two countries involved in the transaction, the rule regarding the country that has the right to tax a particular supply, is the same has on imports. The specification of the intra-community transactions occurs when there are more than two parties involved in one single transport of goods. In these cases exists a simplification rule “Triangulation Simplification” when goods are sold from A to B to C but transported directly from A to C and all parties are established in the European Union.

According with the articles 141 and 197 of VAT Directive when A acquires a good to B in order to sell it to C, the physical full of the good is from B to C, so in that case between A and B we have an exempt intra-community acquisition, since there is no

¹⁰ Palma, Clotilde Celorico (2008), “Introdução ao Imposto Sobre o Valor Acrescentado”, N.º 1 – 3ª Edição.

physical full. In the other side, between B and C we have intra-community transaction and C it will have to support the VAT.

If this rule was not determined in the intra-community transactions B it will have to register for VAT purposes in the country of A in order to pay the VAT and then make an intra-community transaction to C (that is tax exempt) and C it will have to support the final VAT.

2.3. Supply Chain Management and Indirect Taxes

As it was mentioned before the patterns of global trade are changing and companies are now relying on supply chain management, in order to stay competitive (reduce costs, launch new products, and enter in new markets).

The new trend is the globalization of the Supply Chain activities (engineering, sourcing, manufacturing, and logistics) that means that, the Supply Chain activities are now spread all over the world, in order to achieve higher levels of efficiency and this is the main reason why the volume of international trade have increase significantly, in the last few years.

Now goods are crossing national boundaries several times during the production process, each time goods cross a broader, they are potentially subject to indirect taxes and indirect taxes compliance obligations.¹¹

Another important point is that, indirect taxation and global companies nowadays are highly correlated, since the way companies are doing business is profoundly affecting the indirect taxation and changes in these taxes may have a profound effect on companies supply chains, influencing where the activities are carried out. So we can conclude that, the complexity of global supply chains increase the complexity of VAT, since one supply chain may have multiple suppliers, customers and cross-border transactions and ultimately the tax risk it will also increase¹².

¹¹ EY Report – Managing Indirect Taxes (2013) p. 8

¹² EY Report – Managing Indirect Taxes (2013), p. 14.

With longer supply chains, companies are now paying more attention to the impacts that indirect taxes can have on their businesses, the effective management of indirect taxes is now crucial, subjects like indirect taxes cost base (avoiding irrecoverable VAT, excise duties and customs duties), cash flow (delayed VAT refunds and pre-financed duty payments), compliance burden, tax accounting (real-time VAT reporting, tax provisions), corporate risk (reputational risk, penalties) growth opportunities (incentives for setting up new productive activity, intelligent sourcing from or producing in markets where import preferential customs duty rates apply), efficiency (business disrupted by tax audits and new activities delayed for incentive grants) are now being considered.¹³

According with the EY Report “Tax risk and controversy survey: a new era of global risk and uncertainty” companies perceive the indirect taxes as a major source of risk and uncertainty for their businesses.

According with the same report VAT compliance risk and mistakes are more costly since VAT rates are constantly increasing and that leads to more frequent errors such as: VAT paid to suppliers (input VAT) is not reported and recovered in VAT return; VAT paid to suppliers is reported but not recovered because tax authorities find the supplier’s VAT invoice to be valid and VAT paid to suppliers is recovered when it does not qualify for recovery.

Hence we can conclude that effective management of indirect taxes in the supply chain is essentially, if companies wants to survive in a highly competitive market. If these taxes are not properly analyzed the benefits of a supply chain may not be fully maximized or (Euro Pool System), in extreme, may not be realized at all.¹⁴

2.4. Tax Planning

“It is possible to reduce or remove tax liability by perfectly acceptable tax planning (e.g. choosing among tax reliefs and incentives the most advantageous route consistent with normal business transactions), or even by refraining from to combat activities of this kind. To describe tax planning or abstention from language, as ordinarily used, and governments tend to take an operational approach towards tax avoidance to cover

¹³ EY Report – Managing Indirect Taxes (2013)

¹⁴ EY report, Managing Indirect Taxes in the Supply Chain (2013)

those forms of tax minimization which are unacceptable to governments.” (International Tax Avoidance and Evasion - For Related Studies, 1987)

Nowadays with the increase of such trends as the free movement of capital and labor and the gradual removal of trade barriers in connection with the combining of economic interests of nations into federations, are apparent are having an impact on the way that multinational enterprises are being managed.

Based on the above, tax strategy planning and compliance have become much more complex, involve several areas that need to be addressed and managed on global scale. Hence Business Managers need to be aware that changes as business expansion, cost reduction, changes in products and in supply chains create tax opportunities and risks – create financial efficiencies and long-term tax savings - and those can only be addressed by aligning tax strategy and planning with operations.

In that light, tax strategy and planning, should be analyzed and integrated in the corporate strategy of Multinational Enterprises. Moreover tax planning strategies are a useful tool in order to understand the impact that taxes can give in a business. A global tax planning includes the identification of specific tax planning techniques and the categorization of such techniques, definition of several criteria and objectives and provides a framework of planning ideas for corporate taxpayers and advisers. (Finnesty, Merks, Petriccione, & Russo, 2007)

3. METHODOLOGY

Different frameworks are applied to different research purposes. In this thesis the main purpose is analyze a case study in order to perceive the reality and the actual problems that companies are facing about tax policy, which will allow the creation of a framework to be used by companies when they want to address this subject.

A “case study is a suitable research methodology. However, the understanding of what constitutes a case study varies, and hence the quality of the resulting studies.” (Runeson & Höst, 2009). Moreover, according with the authors, there is four types of case studies which differs on the purpose of the research. In this terms, there is the exploratory research (wants to perceived what is happening and find new insights that generate new ideas and hypotheses), descriptive, explanatory and improving.

In this thesis the case study adopted was the explanatory, which aims to understand which are the main problems that companies are facing when they are analyzing tax policy all over the world. A summary of the case study is presented in Table 1.

Key Dimensions	Key Areas	Goals
Literature Concepts	Logistics International Trade International Taxes	Identifying the main problems when companies are subject to tax policy all over the world.
Strategic Focus	Case Study Selection orientation and observation of a Real Case Tax Planning	

Table 1 Main Dimensions, areas and goals of the Case Study

3.1. Research Seating

The first phase of any thesis is the literature research and for that it was used articles in academic and professional journals, reports, books and governmental documents. These documents were obtained via internet with search engines as B-on, ISI Web of Knowledge, Scopus, ABI/INFORM Complete e Elsevier, Econ Papers, Eurostat, OECD and intranet from EY.

The main purpose of the literature research is to identify the principal topics that should be presented. In this study there are three main topics: the globalization, the supply chain management and tax policy, namely VAT. It was by studying all these different areas that it was possible to understand the problem.

The second phase of the study consists in designing the case study. This methodology is usually used to confirm the subject being studied - emergent relationship between Supply Chain and International Taxation.

The selection of LPR, as the case study, was based on the fact that LPR is a successful company that operates in the European Union and is trying to maintain its competitiveness in the global market, dealing with the problem that is under study in a daily basis.

3.2. Data Collection

The Data Collection is one of the crucial parts of any project. In this study the method used was the qualitative data, namely interviews. According with (Kvale, 1996), interviewing is an essential tool in a qualitative research, which outlines both the theoretical underpinnings and the practical aspects of the process. This method is also used to ensure the validation of any conclusion.

3.2.1. Interviews

In any interview process the first step is to select the interviewers. In this study were selected highly knowledgeable professionals with experience in different areas in order to obtain answers with different perspectives.

The first contact with LPR in order to obtain the point of view of their professionals was made through email in which was scheduled a meeting in order to explain the main purpose of the study. After this first contact, it was performed two more interviews with the Director of Logistics Department and to the Director of the Financial Department.

The first interview started with the explanation of the research and the collection of data. It was also explained the international strategy of LPR and its interpretation and understanding of the global tax trends. In this interview, LPR had also the opportunity to explain their processes of expansion and internationalization.

The main purpose of the second interview was to get a better understanding of the LPR' scope of services and how their pallet pooling business operates in the national and international markets, which were the main decisions made in the last years regarding the international tax policy.

Despite these two interviews, it was also performed a third one with a Tax Professional – Manager of the Tax department in EY Portugal. This last interview had the main purpose of understanding the VAT jurisdiction, how the international companies perceive the global tax trends and how they are reacting before this phenomenon. In conclusion, this last interview was very important in terms of getting a different perspective of an expert in the subject.

3.3. Data Analysis

The information obtained from the interview of the Directors of LPR was compared with the company internal documents and website. All the answers obtained during the interviews were written in order to enable future comparisons.

The interviews performed with the Directors of LPR and with the Manager of the Tax department in EY Portugal, had the same categories and the questions were similar. The only difference was in the details of the information answers. Thus, in LPR case the questions were specific to the company experience and, in the interview performed in EY Portugal, the questions were made in a general terms in order to obtain a more

global perspective. The categories used to conduct the interviews are presented on Table 2.

After performing all the necessary interviews, the answers obtained were compared with the theoretical research in order to identifying the similarities and the differences.

Macro Categories	Sub- Categories
Evaluation of the company	LPR scope of services The economic Crises Future Trends
Global Market	Threats and opportunities Investment
International Taxation	Threats and opportunities

Table 2 Interviews Categories

4. LPR CASE STUDY

In this section, was developed the analysis of the case study. According with the research developed, LPR operates in the pallet pooling business; it has 72 warehouses through Europe and it is present in Portugal, Spain, France, Italy, United Kingdom, Germany, Denmark, Belgium, Netherland and Luxemburg.

In 2011, it was acquired by the Euro Pool System a company that provides logistics services to retailers and consider as a Europe leading logistics service provider of returnable packaging solutions for fresh products, holding a 41% share of the returnable packaging for the fruit & vegetable market in continental Europe. In cooperation with European retailers, Euro Pool System focuses on providing optimal, cost-effective and sustainable logistics solutions.

Nowadays, LPR operates a pool of more than ten million pallets with more than 40 million pallet movements annually, and with an annual turnover exceeding 100 million euros. It has a business level off around 20.000 drop-off points in 13 countries of Central and Western Europe. The LPR service consists in delivering pallets whenever

the customer requires, once the order is received, LPR organizes the deliver of the pallets to customers, than LPR collects all the pallets from the final user and take them to the LPR warehouses for sorting and, if necessary, repaired according to quality requirements.



Figure 5 LPR business structure

Together Euro Pool System and LPR have leading service provider in return logistics and returnable assets solutions, recognized by its customer-driven and lean attitude, while aiming for continued growth in its core markets and beyond.

a) LPR Business

The pallet polling service consists in a process where the service provider takes care of every aspects of the transportation of goods. By acquiring this type of service companies outsource the expense, labor and skills required to run the transportation and pallet process.

When companies use a pallet pool provider, they are able to improve their supply chain efficiency - by improving handling processes and reducing storage costs – and they are also able to benefit from several advantages as:

- Reduce operational costs - no capital outlay for one way pallets or shipping platforms
- Meet supply needs during times of seasonal or unexpected spikes as the equipment is available on-demand
- Reduce staff costs with no pallet procurement or disposal programs to manage
- Save on capital expenditure with no obsolete equipment on your balance sheet
- Focus on their core business, not equipment pooling
- Save on storage costs by holding less pallet inventory.

As simplification, it is possible to say that the pallet pool providers have their activity divide in two scopes one is the transportation of goods and the other is the pallet storage. In order to better understand this service, please see the following example:

Company A contact the pallet pooling company – LPR – in order to acquire their service, in this sense we have:

- LPR goes directly to the warehouse of A in order to collect their goods;
- LPR make the distribution of the goods to the local indicated by A
- Once the goods have reached their final destination the pallets are then collected

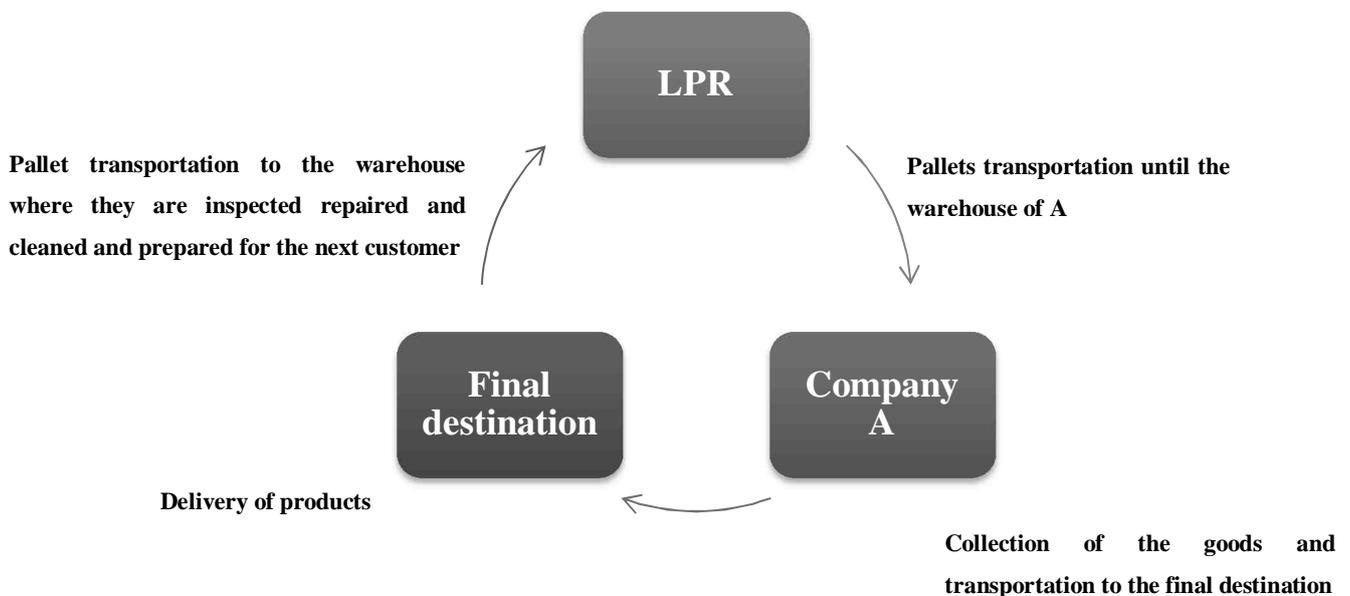


Figure 6 LPR Business activities

4.1. Cross-case analysis

After a preliminary study of LPR scope of services it is clear that when we look for LPR in terms of VAT we can have two different perspectives: LPR as a buyer of pallets and LPR as service provider.

As it was mentioned before, every operation performed in LPR generates VAT cash-flows. In this section, it will be analyze the operations performed by LPR that potentially creates VAT cash-flow.

4.1.1. Acquisition of Pallets

LPR pallets come from sustainably-managed forests, in the specific case of LPR Portugal, they acquire their pallets to a Portuguese supplier. The acquisition of any good represents, in terms of VAT, a cash-flow. In the perspective of LPR, it means that, they will have to pay VAT and later deduct that amount in their monthly declaration to be presented before the Portuguese Tax Authorities, see figure

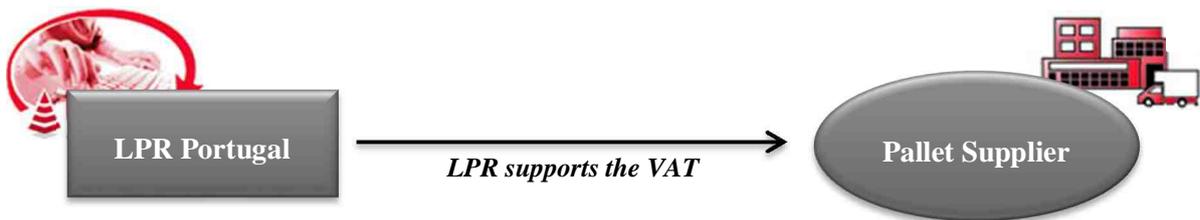


Figure 7 LPR VAT cash flows

4.1.2. Service provider

LPR Service consists in delivering pallets whenever the customer requires. In this section, LPR can make two types of transactions, provide the service to a national customer or provide the service to an international customer within the European Union, in this case we have an intra-community transaction. Both transactions have a different treatment in terms of VAT.

a) **National Customer**

In this case, it will be consider that LPR receives an order from Nestlé to deliver products to Continente. In this case, is present a simple transaction in which Nestlé will pay the VAT and LPR will report that value in the monthly report, as VAT to be delivered to the Portuguese Tax Authorities.

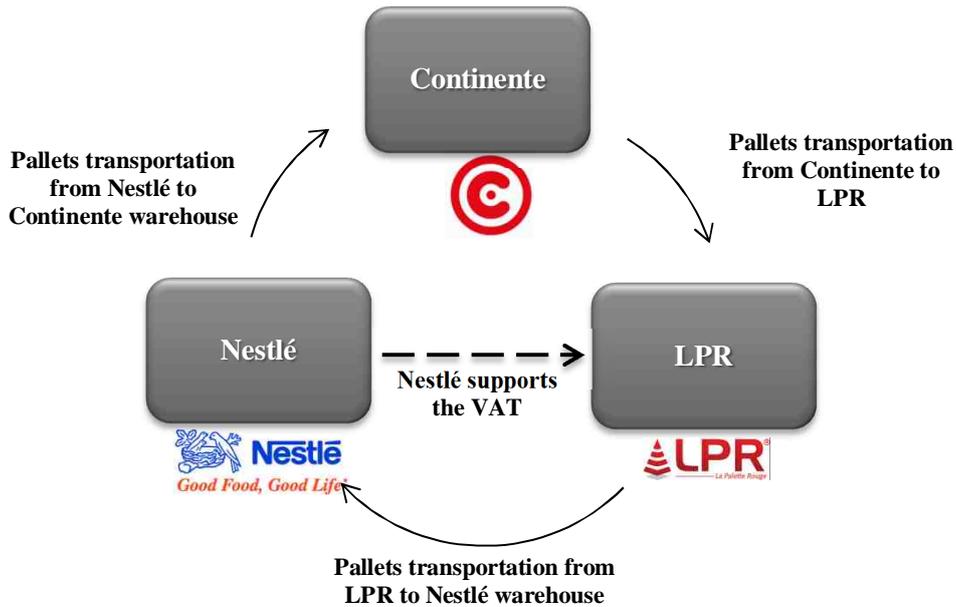


Figure 8 LPR VAT cash flows and logistical flow

b) **Itra-community transaction**

LPR works with several Spanish producers of fresh products and as it was mentioned before the tax treatment of an intra-community transaction is different. Assuming that LPR receives an order from a Spanish producer to deliver pallets with their production in Continente, in this case who will support the VAT?

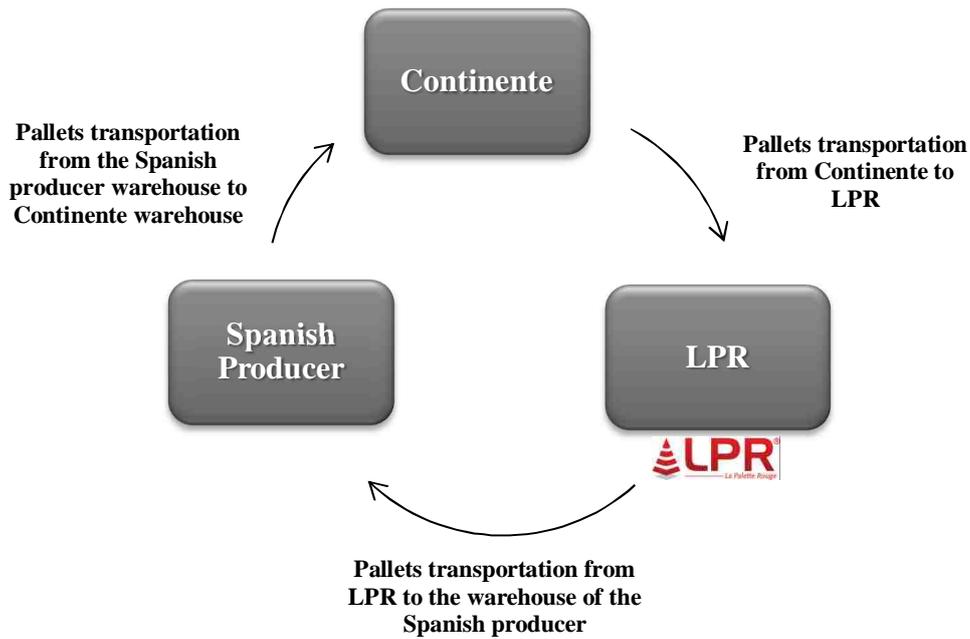


Figure 9 LPR VAT cash flows in a intra-community transaction

In the above diagram it is possible to understand that the service is provide to a Spanish producer and according with the European Union the VAT is due in Spain. However, in this type of transactions there is a simplification mechanism called “reverse charge”¹⁵ in which the acquirer will pay to the supplier, the net value of the service (without VAT) and it will report this transaction on its monthly declaration, as VAT to be recovered and VAT to be paid. On the other hand the supplier does not have any obligation in terms of reporting these transactions.

This method, ensures the neutrality of the transaction and guarantees the non-financial impact in company’s cash flows.

¹⁵ "Reverse Charge" is a part of the VAT law in a growing number of European countries. It states that the VAT (Value Added Tax) for Goods and Services delivered inside the country by a foreign company is owed by the recipient of the goods and not by the Foreign Service provider/supplier. VAT must not be charged on invoices to the recipient. By law, a clear statement must appear on each of these invoices indicating that the liability for the payment of VAT is reversed to the recipient.

5. DISCUSSION AND RESULTS

5.1. Main problems identified

After an extensive analysis of LPR operations and from the information collected through the interviews it was clear that, LPR, is a company that is operating in a global market but is not implementing any tax strategy and planning, in order to benefit from the opportunities in this area and overcome problems.

According with the Directors of LPR, the fact that they are currently operating in the European Union, which in the last few years, have been making efforts in order to create an homogeneous tax policy between all the member status, is the main reason why a tax strategy and planning is not necessary.

Another important point that is necessary to refer is that LPR is underestimating the opportunities that may arise from the tax planning; they are not looking at the long-term savings that can be achieved and the improvements in the company efficiency.

Moreover, it was possible to conclude that tax planning have been left out of the picture when they are investing in new countries and when they choosing their suppliers.

5.2. What should have been done

Nowadays', companies are operating in a much more complex environment with new trends (free movement of capital and labor, shift of the manufacturing base from high to low cost areas, and the gradual removal of the barriers) and this have enable them to optimize production costs, which increase margin profits; high levels of investment in Research and Development (R&D) which makes an extraordinary pressure on margin profits.

Based on the above, companies are now feeling an extra pressure to focus on maximizing margins through being innovative, improving quality, focusing on increasing operational efficiencies, reducing costs and managing risks.

Hence, the Chief Executives and CFOs recognized that the implementation of a tax planning can generate benefits beyond the tax savings and when the tax strategy is aligned with the business context, it may result in sustainable results in the long term.

Thus, tax strategy and planning should be a part of corporate strategy, and should be, on balance with it.

In short, with the globalization and with the new market trends LPR should recognize that, tax planning is now more complex and there is a constant necessity to better align corporate strategy and operations with tax strategy. In these terms, the senior executive of LPR should be able to understand relevant tax concepts in order to develop the overall corporate strategy of LPR.

5.2.1. Implementing a tax strategy and planning

According with (Finnesty, Merks, Petriccione, & Russo, 2007) an important first step in developing a global tax strategy and planning, is benchmarking the global tax efficiency, this is the best way to determine whether tax costs can or should be reduced. For doing this, LPR should determine the appropriate benchmarks(s) and the right companies to benchmark against.

In order to successfully implement a tax planning strategy, LPR should do a detailed analyzes that should point out, the specific planning techniques and the classification of such techniques according with several criteria and goals. In general, after doing the above, tax planning techniques tend to fall within one of two broad tax planning strategies, profit migration strategy and jurisdiction strategy.

The business model of LPR is a distribution center, in other words, the core business of LPR is deliver the pallets with the goods whenever the customer needs. LPR add value by reducing the number of deliveries between manufacturing organizations and retail customer. So, based on LPR specific characteristics, the more suitable strategy is the jurisdiction, this consists on focusing on the use of domestic or in-country tax laws. This strategy is also characterized by taking advantage of local incentives as R&D tax credits, the use of tax loss carry-forwards and loss refreshing transactions and tax-free

asset step-ups. Under this model, most countries tax systems exempt this type of transaction since the distributor does not take title of the goods.

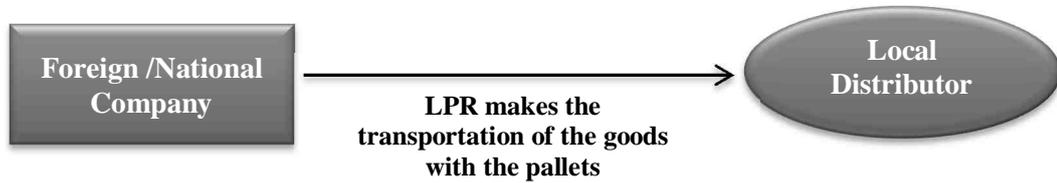


Figure 10 Business Modelo of LPR

LPR should recognize that when ownership passes between the parties in the supply chain and where they are delivered, have an impact on tax. The local where a good is dispatched may change all the supply chain, a VAT registration may be needed, or goods may be held in a country in order to avoid VAT registration. All this should be taken in consideration when LPR is designing their supply chain, since this system can be an opportunity to avoid costs with VAT registrations.

Based on the above it was possible to create 2 scenarios that should be taken into consideration.

Scenario 1

As it was mentioned before, in the last few years LPR Portugal have acquired the pallets to a Portuguese Supplier and with this transaction they have been supporting the VAT amounts and reported them in the monthly report.

Nevertheless, LPR could consider the hypotheses of acquiring the pallets to a producer established in the European Union.

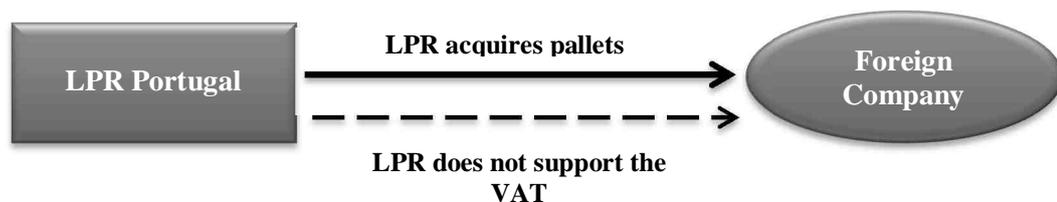


Figure 11 Scenario 1

With this substitution of supplier, LPR will avoid the payment of VAT since it will benefit from the mechanism of reverse se charge. However, when this restructurations is implemented is necessary to analyze another factors as the transportation costs and its impacts in the final price of the product.

Scenario 2

In the second scenario, LPR provides its services to a company established in the UK, in this situation LPR will have to register in terms of VAT since in this country the mechanism of reverse charge does not apply and despite the fact that it will be the acquirer supporting the VAT, LPR will have to report the service to the HM Revenue & Customs.

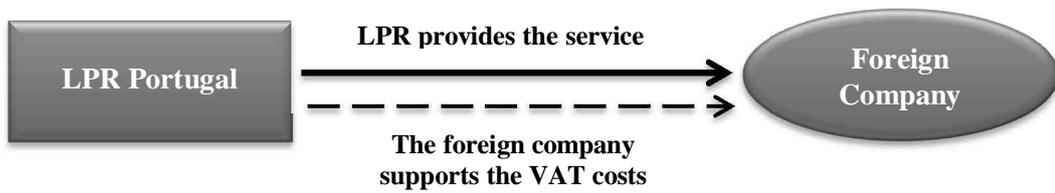


Figure 12 Scenario 2

With the requirement of registration in the United Kingdom, the risk of investing in this new market may be too high. In this situation, LPR Portugal should consider the hypothesis of re-rout the products in order to avoid the VAT registration, for example if LPR Spain is already registered in the United Kingdom, the physical full of the goods can be done as shown on Figure 12.



Figure 13 Reorganization of LPR physical full

Therefore and in order to better understand the impacts of these two scenarios, please find below a brief summary on Table 3.

Scenarios	Costs with VAT	Another costs
Scenario 1	<ul style="list-style-type: none"> - Decrease – there no costs with VAT 	<ul style="list-style-type: none"> - Transportation costs may arise and the final price of the product may arise
Scenario 2	<ul style="list-style-type: none"> - Decrease – there is no necessity of registration in the United Kingdom - VAT costs are supported by LPR Spain 	<ul style="list-style-type: none"> - Transportation costs may arise. - Increase lead time

Table 3 Impacts of Scenario 1 and 2

Based on the above, it is possible to conclude that an integrated and comprehensive planning approach is required to address all the dimensions of global tax planning. Considering this, LPR should focus on tax strategies and planning techniques should be aligned with operations in order to create an integrated global structure in order to address tax and attribute management, for example, taking advantage of the particular characteristics of LPR and the tax systems of countries which it operates. Hence, it is possible to develop some scenarios that aligned both realities, logistics and tax planning.

5.2.2. Restructuring of their Supply Chain

According with the report “The Income Tax Efficient Supply Chain” International tax and supply chain planning are frequently viewed as unrelated activities. The supply chain and the tax decisions are often made by different organizations operating independently, and that is exactly what is happening in LPR.

Therefore, LPR should start a process of restructuring their supply chain and in order to do that, LPR should look at its supply chain (developing scenarios like the two presented in the previous section) and analyze how they can decrease tax burden.

According with (Desai & Jr., 2012) in their report Value-Added Taxes and International Trade the Evidence, there is a negative correlation between VAT and international trade, so it's possible to conclude that companies perceived VAT as negative factor when they are investing in new markets.

Moreover according with (Cohen & Mallik, 1997) an *“Effective management of the activities dispersed through the global supply chain can result in lower production and distribution costs via allocation of value-adding activities to facilities and tax minimization”*.

Thus, companies that understand Indirect Taxes and know how to improve their performance through managing this type of tax can have a competitive advantage among its competitors.

In the specific case of LPR, they have a huge possibility to decrease their tax burden through an effective management of this type of tax. Once LPR is currently operating in the EU, VAT is simply managed, since VAT rules are harmonized in detail through the VAT directive, and the VAT situation with regard to EU Member States is therefore assessed based on the VAT directive.

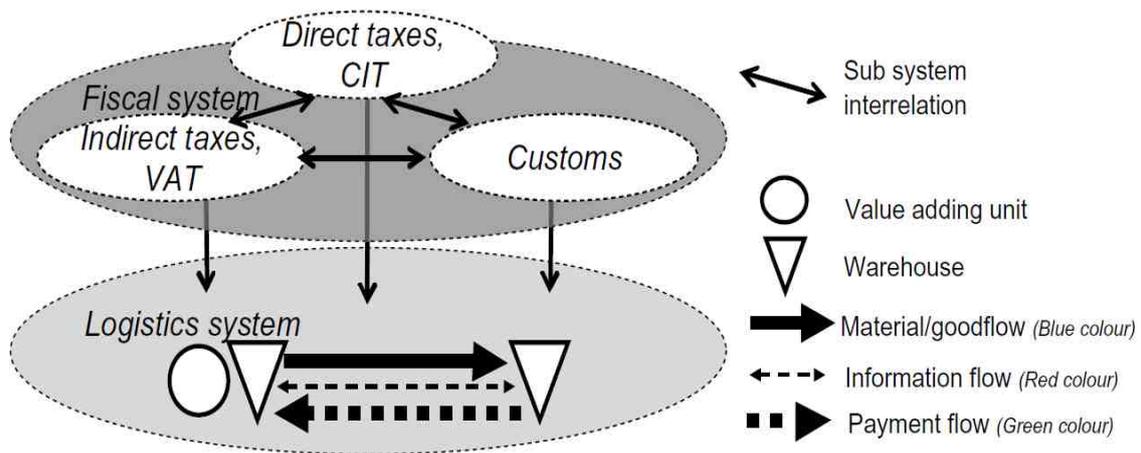


Figure 14 The Overall system

Based on the diagram presented above, LPR needs to determine all the operations that are subject to VAT and between which countries those operations are performed. As it

was possible to conclude, LPR benefits' from a special tax regime that exempt some transaction, since LPR operates as a third party.

The VAT rules in the European Union seem, at first, very straightforward – the seller does not pay VAT and the acquirer accounts for VAT in the acquisition – but when analyzed carefully it seems that every supply chain needs to be looked at and each operation should be evaluated from a VAT perspective. So based on that, LPR should look at its supply chain and analyze the following items:

- Terms of delivery
- Where contractors are established and registered for VAT purposes
- Between each parties in the chain the intra-community transaction occurs and where the other parties should account for VAT on the transaction.

By doing the above, LPR should be in conditions to implement the scenarios proposed in section 6.2.1 and make the decision of which scenario should be adopted by balancing the optimal physical flow within the supply chain and the tax implications in terms of VAT.

Shortly, if LPR wants to implement a tax reconstruction it should focus on 3 pillars (please see Figure 14).

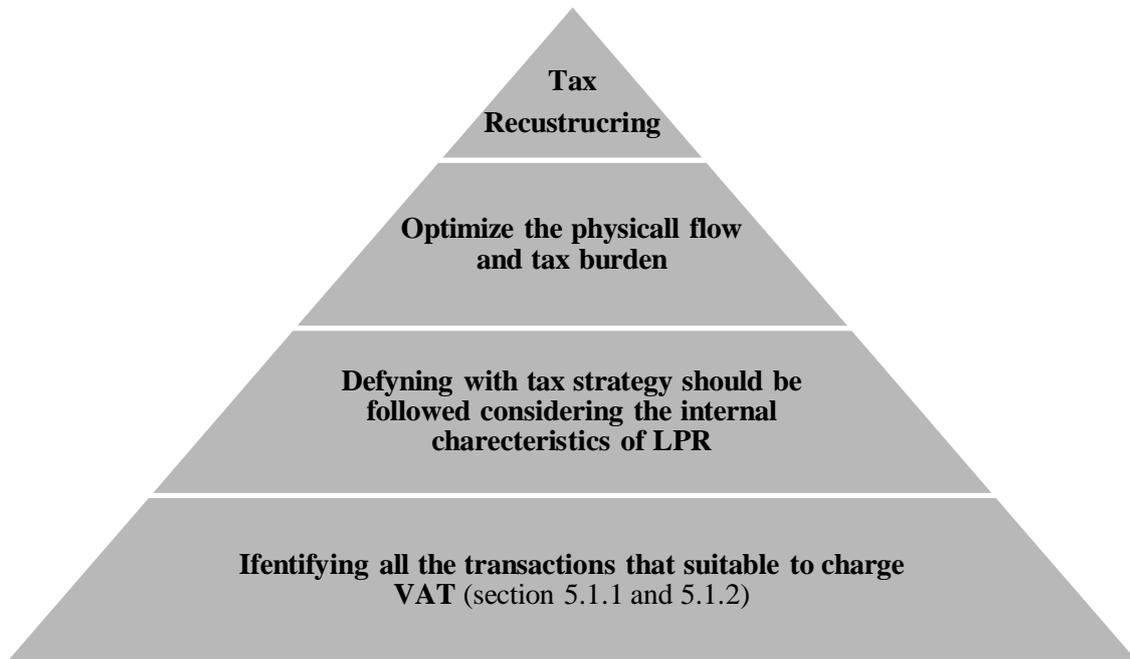


Figure 15 Tax Restructuring

By implementing a tax restructuring as it was presented above, according with (Finnesty, Merks, Petriccione, & Russo, 2007) LPR should achieve the following advantages:

- Competitive advantage among competitors
- Increase cost and operating efficiency
- Increase customer satisfaction
- Decrease the tax burden associated with indirect taxation
- Identification of tax opportunities as tax incentives
- Better identification of new opportunities
- Increase the profitability of investing in new markets

5.2.3 Lessons Learned

With this study and with the theoretical research is possible to understand which should be the steps that each company should follow when intends to restructure their supply chain.

Hence, it is possible to develop a framework, which can be defined as “a real or conceptual structure intended to serve as a support or guide for building something that expands the structure into something useful”¹⁶.

This framework should be used as a script when the indirect taxation and the supply chain are being managed as a common platform. The main goal, is to create a set of steps that any company should follow in order to understand and adequately control all the areas that are involved in restructuring the supply chain.

Based on the above one may suggest the following framework that is composed by the following steps.

1. Benchmark the competitors in terms of global tax efficiency
2. Studying the global tax profit and drivers
3. Setting goals
4. Define a strategic approach
 - 4.1. Identifying all the transactions that are suitable to charge VAT
 - 4.2. Identifying the correct treatment of VAT
 - 4.3. Assess the risks/opportunities – what is the VAT burden in terms of absolute cost and cash flow? How can it be adjusted to mitigate adverse effects?
5. Categorization of planning techniques
6. Weighting and choosing alternatives
7. Implementing the plan
8. Periodically review the plan

¹⁶ <http://www.canberra.edu.au/studyskills/writing/conclusions>

6. CONCLUSIONS

The present study investigated which are the main reasons for logistics and tax policy be managed together and which are the main advantages that can arise from this relationship.

This study presents 3 main goals, which are described below :

- Identify and explain which are the main reasons for logistics and tax policy be managed together;
- Identify the advantages that may arise from the correlated management;
- Prove that if tax decisions are being taken by non-tax professionals at different levels of the supply chain, additional and unnecessary costs are likely to be added to the final cost of the product.

The empirical research suggests that the economic activities have never been as global as they are today; organizations are driven into international trade by the pressure for cost reduction from the customer and the ability to access new markets in order to gain a competitive advantage. It was also demonstrated that one of the major trends in terms of tax policy, all over the world, is the increase of VAT rates – governments are relying on indirect taxation in order to decrease their deficits. More specifically, aligning the supply chain management with the tax policy can be a source to achieve a sustainable competitive advantage and to successfully survive in the international market.

In the present study, it was also used qualitative data, namely interviews. This section was divided in two phases. The first one was performed in EY Portugal, with their tax professionals. With these interviews, it was possible to analyze real cases and understand how tax policy and supply chain can be managed together.

In a second phase, it was performed interviews with LPR Directors which allowed the conclusion that LPR is one of the most important players in the pallet pooling sector and they are currently establishing themselves as a global company operating in the European Union. In terms of tax policy, until this point, LPR did not recognize the benefits/advantages that may arise from a tax planning implementation in their supply chain, which was the starting point of my study.

The main goal of studying LPR was to demonstrate that, if tax decisions are being taken by non-tax professionals at different levels of the supply chain, additional and unnecessary costs are likely to be added to the final cost of the product.

Based on the above, and according with the data collected, LPR should focus on understanding the implications that the supply chain may have in terms of VAT. In order to do that, it was performed a deep research on their operations and analyzed the impacts in terms of VAT. The conclusions of the study are the following:

- LPR operates in the European Union, where there is a huge effort in order to create a homogenous tax policy with similar tax rates and reporting obligations.
- In terms of VAT, LPR should be looked from two different perspectives, the first one is LPR as a customer (supports VAT costs) and the second one is LPR as service provider.

Considering the above, it is possible to conclude that the full physical in terms of VAT, in LPR, is a very broad and complex scenario and the advantages that may arise from restructuring the supply chain are huge.

Accordingly one may conclude that, the restructuring of the supply chain should be based on jurisdiction, since this strategy would allow LPR to maximize the benefits from operating in the European Union, by avoiding unnecessary costs with VAT.

Hence it was possible to create some scenarios where there are both perspectives of LPR - customer and service provider. Therefore, all the scenarios were created taking in consideration the tax policy and the optimal physical flow, however, in this type of restructuring it is necessary to balance the impacts of the decisions in order to create the optimal supply chain. In each decision, should be analyzed:

- VAT costs (possible savings);
- Transportation costs (when the products are re-routed in order to decrease VAT costs, it is necessary to analyze the increase in terms of transportation costs);
- Lead time (when the products are re-routed, the lead-time may increase and the customer satisfaction may decrease);

- Warehouse space (when a lead-time of a product increase it may be necessary to increase the warehouse space in order to guarantee customer satisfaction).

In this sense, there are some dimensions that it is necessary to address in order to achieve an integrated and comprehensive restructuring. By doing this, LPR will benefit from the following advantages:

- Competitive advantage among competitors;
- Increase cost and operating efficiency;
- Increase customer satisfaction;
- Decrease the tax burden associated with indirect taxation;
- Identification of tax opportunities as tax incentives;
- Better identification of new opportunities;
- Increase the profitability of investing in new markets.

As way of conclusion, with this study it was possible to create a framework that should be used as a script when the indirect taxation and the supply chain are being managed as a common platform.

Shortly this study demonstrates that *“The importance of tax-effective supply chains may appear too complex or challenging for many, but the benefits are too important to ignore, and the issue is growing more visible to senior executives and boards. Working collaboratively, operations and finance managers can make a significant difference in their company’s shareholder value” CEO of Tompkins.*

6.1. Limitations and Future Research

This study is based on the analysis of just one specific case – LPR. In order to access a more general and conclusive analysis, it should be studied more examples of real situation and companies.

A further limitation is the lack of literature in this area, since this topic is very recent.

Moreover, the interaction between logistics and the tax system is a very large subject, the present mainly focus on indirect taxation, since this type of tax is nowadays perceiving as the main source of uncertainty in terms of tax policy.

However, there is set of different areas that can be analyzed in tax policy besides indirect taxation, “*Tax planning is the use of legal means to arrange business activities to minimize tax obligations. International tax laws do not prevent companies from organizing their operations to reduce taxes, but firms must be careful to use only legal strategies to reduce tax obligations.*” (Webber, 2010). More research could be done in terms of direct taxes and, in particular, in corporate income taxation in order to analyze the impact of transfer the activities from high-tax jurisdiction to low-tax jurisdiction used to decrease the taxation of the income generated.

BIBLIOGRAFIA

- (n.d.). Retrieved 19 10, 2013, from Insatax:
<http://www.insatax.com/pages/reversecharge.php>
- (n.d.). Retrieved Setembro 22, 2013, from <http://packagingrevolution.net/pallet-rental-lpr-focuses-on-meeting-needs-of-fresh-produce-sector/>
- (n.d.). Retrieved Setembro 20, 2013, from
http://ec.europa.eu/taxation_customs/taxation/vat/how_vat_works/vat_on_services/
- (1987). *International Tax Avoidance and Evasion - For Related Studies*. Paris: OECD.
- (2006). *International VAT/GST Guidelines*. OECD.
- How to design a tax-effective supply chain. (2011, March 17). *Material Handling & Logistics*.
- Tax Reforms in EU Member States. (2012). *European Union*.
- (2013). *Taxation trends in the European Union*. Eurostat Statistical Books.
- Aizenman, J., & Jinjark, Y. (2005). The collection efficiency of the value added tax: theory and international evidence. *Department of Economics, UCSC*.
- Banker, S. (2009, March). The Tax Efficient Supply Chain. *Supply Chain Management Review*.
- Banker, S. (2009, March). The Tax Efficient Supply Chain. *Supply Chain Management Review*.
- Barbone, L., & Bird, R. M. (n.d.). The Costs of VAT: Review of Literature.
- Branch, A. E. (2009). *Global Supply chain management and internaional logistcs*. Routledge.

- Chalet, A., & Owens, J. (2010, September 20). An International Perspective on VAT. *Tax Notes International, Volume 59, Number 12*, p. 943.
- Charlet, A., & Buydens, S. (2012). The OECD International VAT/GST Guidelines: past and future developments. *World Journal of VAT/GST Law vol 1 issue 2*.
- Christopher, M. (2005). *Logistics and Supply Chain Management*.
- Cnossen, S. (1998). VAT in CEE Countries: A Survey and Analysis.
- Cohen, M., & Mallik, S. (1997). *Production and Operations Management*.
- Cpyne, J. J., Jr., J. L., Gibson, B. J., Novack, R. A., & Bardi, E. J. (2009). *Supply Chain Management: A Logistics Perspective*. South-Western CENGAGE Learning.
- Delk, J. W. (2000). International financial management concepts strengthen supply chain links. *Production and Inventory Management Journal*, pp. 59-63.
- Delk, J. W. (2000). International financial Management Journal . *Production and Inventory Management Journal*, pp. 59-63.
- Desai, M., & Jr., J. R. (2012). *Value-Added Taxes and International Trade: The Evidence*. Harvard University.
- Ebber, S. (2010, January 13). The Income Tax Efficient Supply Chain. *Copenhagen Research Group on International Taxation*.
- Euro Pool System*. (n.d.). Retrieved September 25, 2013, from <http://www.europoolsystem.com/en>
- Europa Summaries of EU Legislation*. (n.d.). Retrieved September 20, 2013, from http://europa.eu/legislation_summaries/taxation/l31057_en.htm
- EY. (2013). *Managing Indirect Taxes in the Supply Chain*.
- EY. (2013). *Managing Indirect Taxes*.
- Finnesty, C., Merks, P., Petriccione, M., & Russo, R. (2007). *Fundamentals of International Tax Planning*. IBFD Publications BV.

- Fugate, B. S. (2010). Logistics Performance: Efficiency, Effectiveness and Differentiation. *Journal of Business Logistics*, Vol. 31, No. 1.
- Global, a. P. (2012). Portuguese Tax System.
- Hackett, B. (n.d.). *The impact of the global economic crisis on internation trade*. Port Technolofy International Trade.
- Handfield, R. B., & Nichols, E. L. (2002). *Supply Chain Redesign: Transforming Supply Chains Into Integrated Value Systems*. Financial Tomes Prentice Hall.
- Henkow, O., & Norrman, A. (2011). International Journal of Physical Distribution & Logistics Management Vol. 41, No. 9. pp. 878-895.
- Jeffrey Owens, A. C. (2010). *Tax notes Int'l*.
- Kros, J. F., & Nadler, S. S. (2010). The impact of sarbanes-oxley on off-balance sheet supply chain activities. *Journal of Business Logistics*, Vol. 21, No. 1 .
- Kvale, S. (1996). *InterViews: An Introduction to Qualitative Research Interviewing*. SAGE Publications, Inc.
- Lauge, D., & Emmer, M. (2007, October). Advantages of tax-aligning the supply chain. *Financial Executive*, pp. 56-59.
- Li, L. (2007). *Supply Chain Management: Concepts, Techniques and Practices*. World Science Publishing Co. Pte. Ltd.
- LPR. (n.d.). Retrieved September 24, 2013, from <http://www.lpr.eu/?lang=en>
- Ludwing, M., & Coutinho, D. (2012). A strategic approach to proactive cross-border indirect tax planning. *International Tax Review*,, pp. 10-14.
- Mark Ldwig, D. C. (2002). A strategic approach to proactive cross-border indirect tax planning. *International tax review suppl. Indirect taxes*, pp. 10-14.
- Maurice Emmer, D. L. (2007, October). Advantages of tax-aligning the suppy chain. *Financtal Executive*, pp. 56-59.

- Mentzer, J. T. (2009). *Fundamentals of supply chain management: twelve drivers of competitive Advantage*. Sage Publications, Inc.
- Palma, C. C. (2008). *Introdução ao Imposto sobre o Valor Acrescentado*.
- Runeson, P., & Höst, M. (2009). *Guidelines for conducting and reporting case study software engineering*. Empir Software Eng.,.
- Saunders, M., Lewis, O., & Thornhill, A. (2009). *Research methods for Business Students*. Pearson Education Limited.
- Smith, S. (1992). Financing the European Community: A review of options for the future. *Fiscal Studies*, Vol. 13, No. 4, pp. 98-127.
- Speh, T. W., & Novack, R. A. (1995). The management of financial resources in logistics. *Journal of Business Logistics*, Vol. 16 No. 2.
- Stéphane, B. (2008). *Consumption Tax Trends*. OECD Publishing.
- Tage, S., & Jespersen, B. (2005). *Supply Chain Management in theory and practice*.

ANNEXES

Interview

Question 1: With the economic crises that initiated in 2010 and being LPR a market leader in the European Union which are the main topics in order to stay competitive?

LPR: LPR is a company that has differentiated itself, through the client service. Based on that, the last few years and with the economic crises, LPR has focus its business in meet costumer's expectations and provide them and exceptional service that is custom made. This was the main reason for the continuous growth that LPR have accomplished in last few years.

Despite this, LPR have looked for the economic crisis has an opportunity to develop more efficient ways to accomplish high levels of customer satisfaction with less costs.

Question 2: Which are the operations performed by LPR that potentially generates VAT cash-flows?

LPR: All the operation performed by LPR Portugal generates VAT cash-flows. Nevertheless some are VAT exempt according with the mechanism of "reverse charge"¹⁷.

Question 4: Being LPR a company with 20.000 "drop-off points" for year, which are the impact that VAT has in cash-flows? There is any strategy in order to decrease that impact?

LPR: LPR does not have any tax strategy and planning.

¹⁷ Is a part of the VAT law in a growing number of European Countries. It states that the VAT for Goods and Services delivered inside the country by a foreign company is owed by the recipient of the goods and not by the foreign service provider/supplier. VAT must not be charged on invoices to the recipient. By law, a clear statement must appear on each of these invoices indicating that the liability for the payment of VAT is reversed to the recipient. The foreign service provider/supplier may be entitled to a VAT refund claim for all VAT charges by local suppliers. (Insatex)

Question 5: In average for the 20.000 “drop-off points” which is the percentage of transactions between 2 countries?

LPR: LPR is presented in several countries and which one has there one specification, for example in the case o LPR Portugal, the company has a higher presence in importations and in national transactions.

Question 6: In the last few years, we have been assisting to several variations in the VAT rates for all the European Union? How LPR perceive these variations?

LPR: With the constant increase of VAT rates, the risk of incorrect report of all transactions.

Question 7: According with the information available, in the last few years LPR have entered in several new markets. Which is the role that tax planning assume when LPR is defining the supply chains in mew markets?

LPR: The business model of LPR does not take in consideration the tax impacts when it is investing, once the investments are made locally according with the necessities of each country.

Question 8: Which are the main topics that LPR look at when is defining a tax strategy and planning?

LPR: LPR does not have a tax strategy.

Question 9: The financial department of LPR perceives tax efficiency as an opportunity to grow?

LPR: The business model of LPR is focus in the European Market and mainly in the European Union. One of the main advantages of European Union is the standardization of the tax policies and the future it will be one single tax policy all over the EU.

However, in terms of taxes there always something that can be done in terms of Jurisdiction.

Question 10: LPR have already implemented a restructuring in the supply chain in order to be tax efficient?

LPR: No.