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UNDERSTANDING CHANGES ON THE COUNTRY-OF-ORIGIN EFFECT OF PORTUGAL

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Abstract. The purpose of this study is to understand the international perception of Portugal, as well as the strategies used by Portuguese companies to overcome any possible negative country-of-origin (COO) effect. The paper focuses on companies belonging to different Portuguese businesses: wine, footwear and electromechanical. Cases were chosen because of the dynamic process that was correctly put forward at different levels. The results show that Portuguese companies are interested in getting to know how to accommodate or be part of that dynamic process, as this seems to be crucial if they want to succeed in international markets. The perception of Portugal is improving, and there seems to be signs of a positive COO effect being created in some instances. Most of the achievements are due to the previous success of Portuguese businesses and businesspeople in international markets that have been able to create a positive reputation. The key to success seems to be rooted in how companies combine their unique resources with technological innovations and strategic tools, backed by public policy. This study contributes to enhance the knowledge of managers on the COO effect and its effects on companies, by presenting different levels of analysis: company, industry and country level.

JEL classification: L6, M3, O52

Keywords: COO effect; product evaluation; international marketing; perception; Portugal

1. Introduction

Companies market their value propositions, which are nowadays becoming increasingly difficult to differentiate and communicate. Therefore, factors like technological innovation, purchasing experiences, design or product extras, etc. are now essential to the buyer in his or her decision-making process. It is in this

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context that the COO effect of a single product gains additional relevance. For the purpose of our study, we will adopt Meng, Nasco and Clark (2007)'s definition of Country of origin as an extrinsic product attribute indicating the country where a product was made, was assembled, or both. According to Schooler (1965), the author of one of the first articles in this subject, Country-of-origin can have an effect in consumers' opinion about a product. In 1977, Nagashima added that the country image could be dynamic over time, which grounded the idea that this effect on consumer's opinion is not static and may be influenced and effectively change Papadopoulos et al. (1987). More recently, in 2011, Diamantopoulos et al. (2011) found out that products characteristics are usually associated with general sensations towards a country. Consumers match certain countries with particular product categories, assuming that consumers only will buy these brands because of their superior reputation. A good example of this would be the consideration of Turkey for carpets, whilst Greece would pop up in consumer's minds for yogurt. Following these examples, we could also have the Port wine in the Portuguese.

Many companies in Portugal, a small European economy displaying high levels of openness, make a large percentage of their sales on international markets. In their internationalization process, there are relevant decisions to make, such as decisions on where to export to and what products to export, how those goods and services are going to be marketed, with what levels of adaptation and standardization. Even though Portuguese firms are in most cases experienced in international markets, some suffer from a neutral or even negative international perception (The Economist, 2015; The Financial Times, 2012).

This paper intends to understand the COO effect for Portugal, uncovering the perception that the international community has about Portugal. It also aims to identify the strategies that Portuguese companies may use to generate a positive COO effect. The research focuses on Portugal, as a good example of a country that is understood to face a neutral or negative COO effect, which is, however, changing. On this basis, we would like to uncover the changes that might be taking place in those companies/businesses sectors, so that countries with the same characteristics can also implement changes to improve their COO, as well as other Portuguese firms from other business sectors. In order to analyse the Portuguese situation, we have chosen three case studies that we believe demonstrate good strategies to be followed by companies belonging to different economic sectors. Therefore, the research question that will guide this research is: How can the COO for Portugal be improved?

How to deal with the COO effect

The COO effect can produce a positive, negative or null effect on a country. The COO constitutes a differentiation factor for buyers, and a possible competitive advantage for businesses. The importance of the COO effect on product evaluation has led to a considerable increase in the number of research studies on the concept (Schoolern, 1965). The phenomenon of globalization also adds complexity to the concept. Globalization led to the converging of markets, thus making products more alike, sometimes even indistinguishable, if not for their origin.

Johansson (1985)'s research establishes that not all countries have the capacity to develop a positive COO effect through quality products or competitive prices. The literature on the topic seems to suggest that countries where this capacity is not well developed, as is the case of Portugal, have to rely on the application of different strategies in order to generate a positive COO effect. These countries can take advantage of factors such as unique country resources (exclusive raw materials, technological developments) (Han, 1989), unified brand/identity of one activity sector (Pereira, 2005) or strategic planning (production know-how) (Papadopoulos, 1993). These factors can enhance the development of a system, which it believes can generate a positive impact of the COO.

Unique country resources

Companies that have come to be associated with their COO have, from the perspective of consumers and markets, the same characteristics as the COO (Han, 1989). A country that is perceived as unknown, or with a poor reputation, will tend to be marginalized and rejected by the market (Silva, 2014). Countries that already have a recognizable image and a good reputation can use their country image as a lever to sell their products, because the markets perceive them positively (Agis et al., 2010). This is what happens with alcoholic beverages (i.e. in France with champagne; in Ireland with beer; in Scotland with whisky). In these cases, the COO is essential to the markets (Mandlaze, 2013), because the countries that produce the beverages take advantage of unique farming and production conditions, and specific technical and production know-how to produce unique and distinctive products. These conditions are hard for competitors to replicate. That is why the COO will be positive for typical or regional products, as the COO is the differentiator factor for the market (Gineikiene & Urbanavicius, 2009). This follows the country-specific advantages concept already developed by Dunning (1979).

Sector identity/brand name

The capacity of one activity sector to develop a positive COO effect will depend on its ability to develop a brand or identity for the companies of that sector, which can transmit to the markets an image of confidence and quality in the products of that sector as a whole. The success of one brand is thus connected to the way the representatives of that sector bring, communicate and present the brand differentiator factors to the markets (Interbrand, 2003[1]). A brand needs to be easily recognizable, and possess a multitude of differentiator characteristics that distance it from its competitors. These characteristics are achieved through adaptability and good value for money (Lencastre, 2007). The success of a brand gains more relevance to sectors connected with the textiles/fashion world, for instance, considering that this sector works as a reference to the markets (Agis et al., 2010). Hence, in this sector, one brand can become better known than the country of its origin, and incorporate the products, the company and the sector within itself (Pereira, 2005).

[1] www.brandchannel.com accessed 6/3/2016 at 6pm

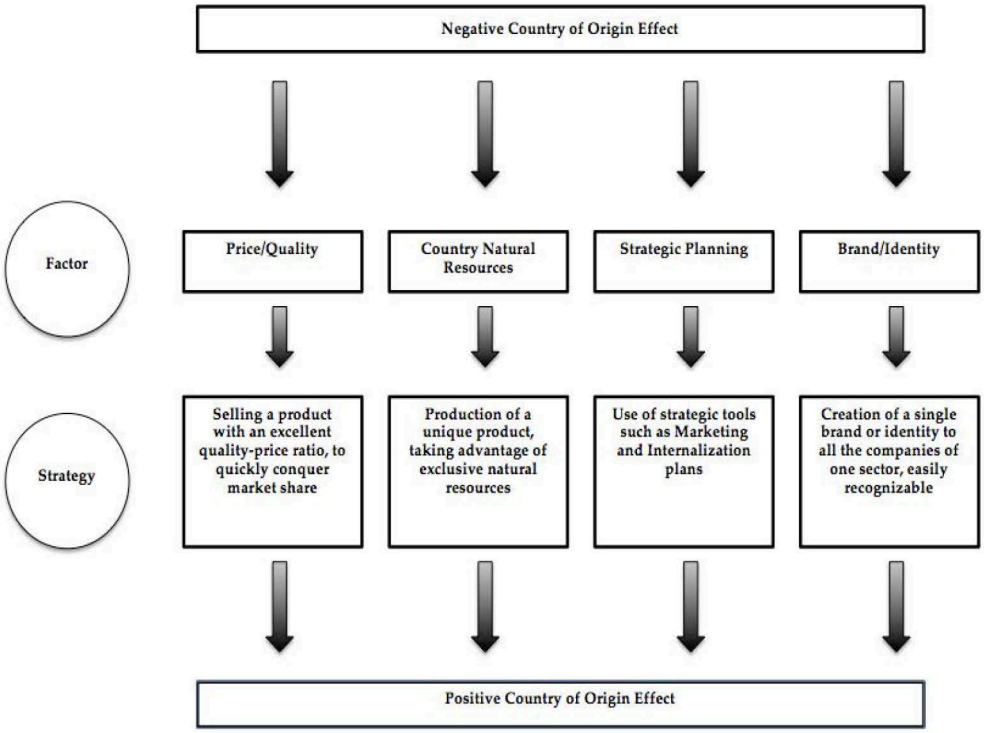
Firm's strategic planning

According to Johansson (1985) the factors essential to product evaluation, include price, quality, guarantee, extras and COO. All of these factors can be applied and developed through efforts made by firms. The strategy is a determinant element to the COO effect, because it has implications on the image and reputation of a country (Silva, 2014). Companies that are funded in a country with a negative COO effect will tend to have an increasingly harder path to success in international markets, even though it are increasingly witnessing situations in which that trend is reversed. As stated previously, the markets will apply the negative image of the COO to the company itself (Han, 1989). As markets become more international, the more prominent the origin of the product will tend to be (Papadopoulos, 1993). Nonetheless, the globalization phenomenon, technological innovations and changes in consumer behaviour have contributed to increase the dynamics of international markets and to the creation of a larger number of business opportunities (Ansoff, 1957). Companies that are investing more on research and development, and manifest a greater predisposition to innovate, may revolutionize markets, but they need to develop first a solid strategic planning to support it (Hamel, 1996). In the definition of strategy, companies may take marketing, production, sales and internationalization decisions devoted to positioning themselves internationally. Companies that can succeed in the global market will be able to engender a positive COO effect, because markets will consider the producing company as more important in comparison with the origin of the product (Chung Koo Kim, 1995). This is a reversal of the fatalistic position that some companies seemed to hold before due to their COO.

Proposed model

Strategies to deal with the COO effect form the basis for companies, sectors, industries or countries that want to achieve a positive COO effect. The variety of strategies developed at all levels demonstrates that quality, price and guarantees are not the only factors that can greatly influence the COO effect. Hence, changes in that perception can occur through the use of other instruments. By doing so, countries, as a whole, business sectors or companies on their own can change negative implications of COO normally associated with some countries. The literature review allowed us to identify and understand the multiple strategies to consider in order to change a negative COO effect into a positive one. It defined four factors, which can serve as a basis to develop a positive COO effect (See figure 1).

Figure 1. Factors and strategies essential to change a COO effect



Source: authors.

One of the most relevant factors is the **quality and the price** of the product (Johansson, 1985). A product with an excellent quality-price ratio will be able to win quickly market share, gathering immediate interest from the markets. The country or company that is associated with that product will have a positive COO effect. However, not all companies and countries can base their strategy for coping with a negative COO effect on quality and price. In many cases, as it have been witnessing in the advent of emerging MNE markets (Chattopadhay et al. 2012), they are forced to rely on other options to develop a positive COO effect. Those options will be based on factors such as the **unique conditions**, resources and raw materials of the country, **brand or identity efforts made by the representatives of one particular sector,** and **strategic planning** on the firms' side.

In relation to the **unique conditions**, resources and raw materials, companies can develop unique products, from a single region, for example, which competitors cannot replicate, taking advantage of excellent natural conditions. The COO effect will be positive because of the exclusivity of the product. However, obviously this should be backed by a marketing effort related to that unique value proposition.

One **brand or identity**, which identifies the products and activities of the companies of one sector, enhances the probability of creating a unified well-known and global brand. Cooperation between companies and the sharing of ideas makes it possible to produce products with quality and develop the correct promotion techniques. A brand needs to be easily recognizable, and transmit a sense of quality and reliability to the markets. A famous brand, known by a large number of markets, will contribute to a positive COO effect. This work needs to be done by the trade associations or industrial associations that act on behalf of the firms they represent and to combine their efforts, normally by trying to negotiate in better conditions, to place larger orders, to promote the products of the associated members, etc. Therefore, they represent the interests of smaller firms acting as if they were one larger company.

Strategic planning from one specific company can also help to overcome a negative COO effect. Strategic tools such as marketing activities, efficient production processes and good internationalization plans can support this. The capacity of one company to build a global and respected reputation, with a strategic planning, will determine the possibility of coping with a not so good COO effect. Each company, sector, country and manager needs to understand what is the strategy that suits their purpose the best (to overcome a negative COO or implement a positive impact of the COO), because each case involves different dynamics, which will influence the application of the strategies previously identified.

After identifying the techniques that can be used to implement a positive COO over a negative one, it is necessary to demonstrate how they can be applied. Using the three case studies, we want to demonstrate how managers, companies and countries can overcome the effects of a negative COO.

2. Methodology

For Yin (1994), the case study method is suitable when researching a contemporary phenomenon in a real life context; the borders between the phenomenon and the context are not clearly defined and a multitude of sources can be used as evidence, which seems to be the case. We will rely on a qualitative approach, based on the case study method, to understand the impact of the COO effect on Portugal and the strategies that were used to generate a positive COO effect in some respects. The three case studies used are from different areas/sectors. The first case study is on the Portuguese port wine sector and describes the successful internationalization process of port wine companies. The second one focuses on the Portuguese footwear sector. It clarifies the perception of the markets on Portuguese footwear and describes the strategy of the association of the Portuguese shoe sector to develop a new brand and identity for the industry. The third one is about the electromechanical sector, and explains the strategy behind the internationalization plan of EFACEC, allowing us to understand how the company became global, easily recognizable and well known. In all cases, secondary data was used.

The COO of Portugal

Constant changes in the behaviour of the markets and societies worldwide have determined the importance of constantly controlling the impact of such changes on each country's businesses. In the case of Portugal, its performance has recently been brought to the news due to the difficulties that the country has gone through with the impact of the great financial crisis and its consequences that led to the implementation of an economic adjustment programme in May 2011. This means that, recently, the international society has not been given a good idea of the country. In some stances, we can even say that internationally Portugal has no contributing for the formation of a positive COO, which is definitively not good for Portuguese companies or Portuguese businesspeople. We understand this to be even more acute in countries from outside Europe that do not normally "hear" about Portugal on the news, until within the European Union context, they began to "hear", but not for positive reasons. The perception of Portugal directly influences the impact of the COO and in this way limits firms' opportunities to position their products abroad.

Hancock (2015) mentioned on his book on Portuguese people that "desenrascanço" is a Portuguese word referring to their ability to find an incredible last-minute solution to a problem, mostly one caused by their own inaction. He believes that this is the best word to represent the Portuguese population and industries. The International Study on Management Practices, produced by the International Monetary Fund, and the World Bank, in 2015, conveys that Portugal has poor managers and urges the country to invest in training its managers. According to the same sources, the traditional mentalities of Portuguese entrepreneurs lead foreigners to believe that Portugal is still stuck in the past. Furthermore, the www.executiveplanet.com refers to Portuguese business leaders as having a very conservative attitude. This attitude determines the behaviour, strategies, negotiations and image of Portuguese businesses. Bosses are considered to be authoritarian, averse to change and concentrating all authority in themselves. The centralization of power diminishes the chances of developing innovative ideas and changing company strategies. This perception fits the Hofstede Cultural Dimension study (Hofstede, 2004), which ranks Portugal in the 2nd place on the Uncertainty Avoidance cultural dimension. Countries with high scores in this dimension need as many rules as possible to know how to perform their activities. They are known to live with a high level of stress and to constantly worry that something will force a significant change in their normal routines. This means that the average Portuguese citizen resists change and feels comfortable maintaining the status quo (Hofstede, 1997). The Portuguese are, then, considered to prefer to take few risks in a negotiation and to prefer it face-to-face. This retraction against international business activity shapes an image of the unwillingness of companies to work with international markets, which, is currently being changed.

Table 1. Portugal COO effect – negative factors

Stereotypes	*Verity*	*Improvements*	*Impact on the country image*
Disrespect for instituted rules	Partly true	Few	Negative
Unwillingness to internationalize	Not true	Several	Negative
Poor and few managers	Not that true	Significant	Negative
Conservative businesspeople	Partly true	Few	Negative

Source: authors.

Fortunately, Portugal is already making important steps in this field. Two Portuguese universities and their respective Masters in Management are ranked among the top 100 Masters in Management, according to the Financial Times in 2015. In the ranking, we find that graduates from the Masters in Management from Univesidade Católica Portuguesa (with a 98% employability rate and an average annual salary of 40,000 USD) and graduates from the Masters in Management from Universidade Nova of Lisbon (with a 87% employability and an annual salary of 47,000 USD). The growing reputation of these universities along with the entrance of their graduates into the market, even if slowly over time, has been crucial for the development of management, finance and strategy processes going on in Portugal. Additionally, Portuguese MBA programmes, and Portuguese universities overall are gradually enrolling in international accreditation programmes, and are successfully obtaining accreditations such as EQUIS and AMBA.

In fact, the perception of Portugal has been constantly changing over the years, as executiveplanet.com (2015) reports: “Only 30 years ago Portugal still had a poor, backward agrarian economy propped up by wealth stripped from its colonies. While the changes since have been dramatic, Portugal has yet to fully take on board the requirements for competitiveness in a modern market economy.” For this, changes on the political and economic panorama have been contributing significantly (Financial Times, 2012). The general opinion and perception is that, although Portugal has been registering some major improvements, there is still a long way to go. Nevertheless, businesses are now registering an inescapable internationalization mentality. This mentality was largely enhanced by the work of AICEP (Agência para o Investimento e Comércio Externo de Portugal), a government business entity, created in 2007, focusing on encouraging foreign companies to invest in Portugal and contribute to the success of Portuguese companies abroad in their internationalization processes or export activities. The positive impact of AICEP’s measures, the success of several Portuguese start-ups abroad and the necessity to export further due to the decline in buying power of the internal and EU market, moved Portugal forward to

an active presence and improved competiveness. As Paddy Cosgrove (2016), founder of Web Summit, said to the Portuguese newspaper Público, "the most important and fundamental thing is that the basis was built a long time ago". At this moment, in Portugal, we can find an important basis for entrepreneurs, incubators and business development programmes. The goal is to give Portuguese businesses an international dimension while removing the barriers of negative perceptions and stereotypes.

Negative perceptions reflect poorly on the image of Portugal and restrain the ability of the country's companies and business leaders to expand their business activities. However, we understand this scenario to have been changing significantly and evidence of this is now available in the news. Needless to say that changes in Portugal's COO, which are responsible for the country not having to cope with the burden of its brand name anymore, were not implemented from one day to the next. In fact, as one source mentioned, they took years to emerge, and even though one can no longer say there is a liability behind the country's name, much is still to be implemented.

3. Case studies

Port wine sector

Regional products are associated with the traditional habits of older societies, specific geographical characteristics, raw materials and unique production processes. In the case of the production of port wine, the Região Demarcada do Douro (DOC), one of the oldest denominated wine regions of the world, dating back to the 18th century, is characterized by the climate of the region and the soils. The gravel soils help with the provision of water, guaranteeing the quality of the vineyards. Also the hills of the Douro region, in the North of Portugal, protect the vineyards from the moist winds of the Atlantic Ocean, providing the ideal climate for port wine raw materials: the grapes. In the Douro region, precipitation is low and it reduces towards the summer, accompanied by a slow, but steady, increase in the average temperature. These unique conditions make the terraced hills of the Douro the best place to produce port wine, standing out from other production locations, for its uniqueness and quality of production.

The port wine sector is one of the oldest and most traditional Portuguese sectors. However, since the beginning of its activity, firms have been oriented to the international markets. Today all port wines companies acting in Portugal are international. This type of sector prefers to enter foreign markets through direct exportation or specialized contacts in these markets (i.e. intermediaries, agents, distributors and sales subsidiaries, in some cases). Of the five main players at the moment, only one has 100% Portuguese capital.

It was based on the premises above that port wine brand groups, like Sogevinus Fine Wines, S.A. (as a matter of fact, a 100% Spanish company owning brands such as Burmester or Cálem) built their way to success. Port wine companies are oriented to the exportation of their products, recognizing the decreasing trend of internal consumption and an increasing external one, and the interest in port wine by international markets. Depending on the market, companies use: foreign distributors, direct investment and foreign agents. The target markets are those that present the best opportunities to increase the value of the brand and volume sales. Basically, companies

sell all over the world, with 720,772 hectolitres exported in 2014, representing 25% of Portuguese wine exports, the majority exported to markets like France, Angola and the UK (Instituto do Vinho e da Vinha, 2014). In order to promote their product, companies establish an expansion strategy based on participation in international fairs and industry related events, to expand the familiarity of the brand and advertise their products.

Portuguese footwear sector

The traditional Portuguese footwear sector was historically associated with the production and commercialization of low quality products, normally related to low labour costs. This means that the country's name, when associated with this industry, exerted a negative impact. To fight this negative perception, the sector, seen as one of the most traditional, was forced, in the late 20th century, early 21st century, to develop a series of differentiating factors (innovative production, modernization and improvement in the quality of the product through high tech processes) in order to compete with foreign industries in international markets. The changes (quality improvements, new marketing strategies, revolutionizing design) resulted in the production and commercialization of products to highly demanding and sophisticated markets with a more risky fashion sense, yet, suited to the new fashion trends. It was a strong response from a sector mostly made up of small, family companies to the growth of opportunities in international markets, mostly provided by the globalization phenomenon and the converging of societies and markets.

The strategy defined by APICCAPS (Associação Portuguesa dos Industriais de Calçado, Componentes, Artigos de Pele e seus Sucedâneos), changed the paradigm of the Portuguese footwear sector. Nowadays the perception is that their products are high quality, with an appealing and modern design, making the Portuguese shoe one of the best in the world. The transformation of the sector was based on design changes and marketing to promote the new outlook on the Portuguese footwear sector. The sector became one of the most important sectors to the Portuguese trade balance. Of total exports by this sector, 92% are destined for European markets. The improvement in the perception of Portuguese footwear has been supported by ground breaking promotional campaigns aimed at international buyers. The promotion of the product is being conducted by APICCAPS, the association responsible for the promotion of the Portuguese footwear sector, and for the support of the internationalization of the sector's brands. The promotion campaigns aim to consolidate the Portuguese footwear brands in the mind of international buyers and companies, while increasing the number of countries that receive Portuguese exports.

The Portuguese shoe is, at the moment, considered one of the best in the world. As a blind test ran during MICAM, the biggest footwear fair in the world, by the Universidade Católica Portuguesa attested, the Portuguese shoe was considered to be the most valuable shoe, even ahead of the Italian shoe. These results are an example of the huge leap in quality, competitiveness and design made by this Portuguese industry, which became the number one driver of Portuguese exports in 2015[2].

[2] In Jornal Económico, in 12/2/2016.

Electromechanical sector

EFACEC group is a Portuguese company, with a large presence in international markets, integrated in a sophisticated sector, the electromechanical sector. It operates in the energy, engineering and mobility sectors. It is the largest Portuguese electromechanical group and it was founded in 1948. It is present in almost 65 countries and the volume of business to international markets represents almost 65% of group revenue. This group is embedded in an extremely competitive market, where companies constantly present technological developments, forcing competitors to adapt continuously. Bearing this reality in mind, in 1990, EFACEC developed an internationalization strategy based on market studies and the development of new products on the basis of forefront technology (such as renewable energies and new transportation interfaces). The multitude of sectors in which the group works forced them to adapt different strategies to different markets. They developed entry strategies such as joint ventures, subsidiaries and foreign direct investments. Nowadays EFACEC operates on the global market competing against other important companies. Although it operates on a smaller scale than more important and financially wealthy companies, EFACEC has successfully competed against several businesses due to the fact that that the group is good at what they do (their products and services are present all over the world in 34 countries operating in several areas, such as communications, transport, industrial equipment, etc.). The company has invested in high-tech processes, restructured its facilities and equipment, which has provided the group with the capacity to produce the same or even better solutions than their competitors (more energy efficient, durable and resistant). Supported by its innovative practices and the input of resources from the new owners of the group (José Mello Group and Têxtil Manuel Gonçalves) the group outlined a strategic plan in order to leverage its position on international markets and to respond to the challenges that the same markets present. The new organizational model consisted of ten business units, and three specialization areas (energy, engineering (environmental and services) and mobility (transports and logistics)), applied to specific markets. When the model proved to be successful in one country, the group replicated it in another.

The model applied to the cases

The effects of the great financial crisis that affected Portugal in 2011 and the reduction in Portuguese purchasing power have contributed to the expansion of Portuguese products and businesses to international markets, namely to those outside Europe, not so aware of Portugal as a producer of some goods. The three case studies demonstrated three different strategies to work with the absence and possibly negative COO effect that Portugal may suffer from. In all three cases, the companies seemed to have known how to overcome any disadvantages associated with any negative image that Portugal might have and even create a more positive perception about Portuguese goods.

In the case of the port wine case study, the certified regional or national Portuguese product acquires its competitiveness and reputation through its singularity and differentiation in the eyes of the market. Therefore, we can say that the reasons for this lie in a national level approach. Indeed, Portugal sets the

standard for port wine. The crucial part of the success of companies with this type of product is in the way in which the country draws on its natural competitive advantages for this production. The port wine sector is therefore a good example proving that the soil and climate conditions (natural) of a country are essential to develop specific products and that the COO of a product influences the choice of a buyer, so that, in this case, the COO adds value to the product. The unique characteristics and qualities of the product, impossible to replicate in full by competitors, ensures the preference and the reference of this product in the markets.

Although it is true that in the case of the Portuguese footwear sector, the perception has changed and now the COO can apply a positive effect, it also means that the industry will have to continue to work hard to maintain the positive impetus acquired in the past years. The work of APICCAPS and the companies of the sector not only annulled the negative effects of the COO on this sector, but it even allowed them to become positive, as recent studies that place Portuguese shoes as the second best in the world, right after Italian ones, demonstrates. It has achieved a change in the perception of the products, brands and companies associated with the Portuguese footwear sector. The innovation in design, the promotional work, the acquisition of technologically advanced raw materials, the creation of one identity for the companies of the sector and the definition of a production and selling strategy of high quality products have changed the panorama of the Portuguese footwear sector. Today Portuguese shoes are spontaneously associated with words such as “good quality”, “competitive”, “modern”, “young fashion”, “design” and “innovation”, as the specialists of the sector state[3].

With the case of the electromechanical industry (EFACEC), it can also demonstrate how any negative COO was overcome, but this time due to the actions of a single firm. EFACEC potentiated the growth of sales and the reputation of the company. Through a well-organized strategy implemented during years in which the firm always maintained an image of quality, EFACEC grew in the international markets, proving that the influence of the COO can be diluted. In this case the impact of the COO effect is, currently positive because EFACEC built a strategy based on product innovation and adaptability to markets, which made the company achieve global status and have a specific plan for each market. By overcoming the COO factor, EFACEC can now even extend a positive COO to other Portuguese companies and on Portugal. The positive perception of the company and the status that the company achieved, are applied to the COO, like a halo effect. So this effect can be achieved not only when the natural conditions and history play a positive role on the creation of a positive COO, or when sectorial organizations work as a whole,, but individual firms may also change the COO of a country for the better, which also accords with the eclectic paradigm proposed by Dunning in 1979 (firm-specific advantages).

The three case studies demonstrate that the perception of an old-fashioned Portugal seems to belong to the past. Each sector applied a different strategy, the traditional sector – wine – had the ability to adapt to new realities and learn how to derive benefit from its natural competitive advantages to succeed. The Port wine

[3] In Jornal Económico, in 12/2/2016.

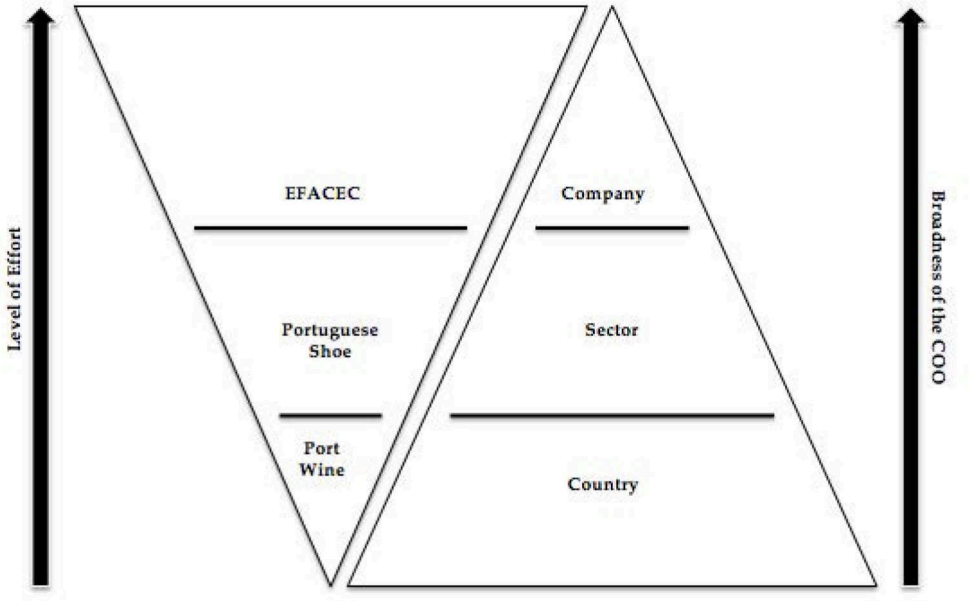
sector used the exclusivity and uniqueness factor of its products to triumph in a very active market. The first one proves that the positive reputation of Portugal, as a producer of port wine, due to the unique conditions of the North of Portugal, associated with centuries of history, reflects positively and helps port wine companies to triumph in international markets. This provides a natural incentive to operate in international markets.

The Portuguese footwear producers had the foresight to align their efforts and through an association created to represent their interests, the sector used creativity, strategic planning and innovation to retune their image and productive capacity, basing their selling proposition on other factors rather than low cost labour. The example confirms the importance of cooperation between the representatives of a sector in order to develop a single identity and brand, which will be the flag of the sector on international markets. It provides an example of a turnaround from a sector that had a negative COO effect to a sector that has, currently, a very positive one.

Through the combination of critical internationalization strategies with an excellent use of productive-technical expertise of the Portuguese labour force, one electromechanical company has managed to gain a cornerstone in the international markets. The EFACEC case study helps to understand how a company was able to develop a global reputation, therefore contributing, nowadays, to a positive COO effect.

Hence, it is proposed the model of figure 2 to summarize our reasoning of what happened in these Portuguese situations.

Figure 2. Level of analysis of the intervention and sophistication and efforts necessary



Source: Authors.

Above it see that the more sophisticated the industry is, the greater the willingness of firms to work on countering any negative effect should be. The sophistication of the industry refers thus to the efforts that are necessary to implement a positive COO. The more sophisticated the sector, the more difficult it is to build a positive COO effect and the greater the effort necessary to produce a positive COO effect would be, especially by a brand name.

The figure shows that in the more traditional sectors, positively associated with natural characteristics and resources in Portugal, it is less demanding to work on a positive COO effect. This is contrary to what happens in a more sophisticated sector, where more difficulties occur in developing a positive COO effect.

Portugal is a country that specialized in traditional sectors such as textiles, wine, cork and shoes (Porter, 1993)[4]. In the Porter Report (1993), these were identified as the sectors that the government should develop as Portugal was considered not to have the necessary competences to be a leader in sophisticated and technological sectors. However, we understand now that this was not necessarily true. In fact, the government should invest in the sophisticated sectors, assist the cooperative movements and collaborative initiatives of producers in several fields, and stimulate firms to take the lead in building a positive COO effect.

4. Findings

Resuming the research question – How can the COO in Portugal be improved? – we can conclude that the COO impact in Portugal can be changed by applying the strategies previously identified in the literature review and proved by the conclusions of the case studies. Companies belonging to the traditional sectors (i.e. port wine and Portuguese footwear) need to use their unique resources, recognizable products and unity of the sector to propel them to be better perceived by the markets. As Gineikienė and Urbanavicius (2009) state, regional products, when famous for being produced in one region, have a better reputation for the markets. Products that have a negative perception, due to their COO, and that cannot take advantage of natural conditions or a positive reputation, need their sector to cooperate, in order to grow as one, associating all the positives from the sector within the product that they develop and commercialize. Just like the Portuguese footwear industry, it is necessary to take advantage of the unique qualities of the sector and association of all companies, working as one for the collective goal of improving quality, marketing and the general competitiveness of the product.

Companies from a sophisticated sector (i.e. EFACEC – electromechanical sector) need strategic planning and technological innovation, in order to produce a positive COO effect. At a time when the business world is increasingly competitive, a capable and assertive business strategy is, from the start, a source of competitive advantage to businesses. Businesses that are able to perceive the trends in consumption and the preferences of their clients and buyers will be in a better position to hit the markets and be successful in international markets.

In the COO literature, most studies focus on ways to reduce the negative impact and not so concerned with the conditions to project a positive impact,

[4] Porter Report – Portugal, 1993

studying the dynamic and natural conditions of the countries. This paper enhances the knowledge on the field. The triangular framework helps to understand that there are various strategies for working with the COO effect, and that companies, depending on their sector and activities, might have to work hard to generate a positive COO effect, namely those belonging to more sophisticated industries. Sophisticated sectors have a harder path to a positive COO effect because they depend on factors like technological innovation and strategic planning, which are not easy to take for granted for clients and take years to build. These are company-related factors mainly. Traditional sectors will tend to have an easier path to a positive COO effect, because they can take advantage of natural resources and conditions, which are not possible to replicate by competitors. Logically their product is exclusive and markets tend to associate the production country with quality products. The positive effect of the COO in this case is more natural and the advantages country-related. A country constituted by a large number of traditional sectors has a better chance of having a positive COO effect, than a country mostly constituted by sophisticated sectors. However that does not mean that they can be complacent, as new world competitors are every day challenging this, as we can see with champagne and port wine drinks, being produced in other worldwide locations. In the case of traditional sectors that cannot take advantage of natural resources, or even from a positive reputation associated with their product, they can follow a similar path to the one adise more sophisticated sectors. One that guarantees a shot at successfully implementing a positive COO is associativity. A sector that is able to work together as a whole can largely improve their product and strengthen, through collectivism, the solidity of the companies that constitute the sector. This way, companies will be able to have more resources (human, physical, intellectual) to innovate in design, production processes and marketing tools. The sector will be able to build a positive reputation for itself.

We understand that Portuguese managers should invest in technological innovation, as well as in the incorporation of qualified labour, and studies on the identification of the advantages of being Portuguese in the international markets. They should also try to work with national associations and implement a strategic thinking in their corporations. In order to potentiate the growth of the Portuguese industry and economy, the government needs to reduce bureaucracy, and simplify the process associated with the attribution of European funds and invest in the promotion of the Portuguese brand in the international markets, to sell the Portuguese brand as one. In the same way, situations such as the one that led to the creation and development of APICCAPS should be regarded as benchmarks for other equally traditional sectors that have high potential such as pottery, glass and textiles, to name just a few.

99.9% of Portuguese businesses are SMEs, whose priority has not been marketing. In many cases, they have struggled to find financial resources to access equipment that can guarantee short-term financial gains. This uncertainty shines through the internationalization strategies of several companies that prefer to take low risks. However, this approach is changing, and many companies are realizing that their competitiveness can be extended to countries outside the EU. The future should bring technological advances, start-ups support, improvements in the contents taught at universities (management, entrepreneurship, etc.), in addition to participation in international fairs. Actions like these should promote Portugal in international markets and associate it with more positive images.

As for limitations and hints for further research, we may say that the results of the research are based on case studies of companies located solely in Portugal, which is a limitation. Furthermore, the replication power of the findings are limited due to the study of just three cases of anedoctal evidence in specific sectors within specific country. This research could therefore be extended to other sectors and applied to other countries whose COO is still consider a liability (i.e. other European Mediterranean countries, such as Greece or Spain and other rather small economies located in other geographic areas like, for instance, Latin America, North Africa or the Middle East). Future works could also focus on investigating examples of successful Portuguese products on international markets, describe the changes in the perception of Portugal as a name and evaluate the impact of the Portuguese current economic scenario on the image of Portuguese made products. As for this purpose, longitudinal studies would be necessary to infer on some of these findings.

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THE ORGANIZATIONAL CULTURE DIMENSIONS – THE CASE OF AN INDEPENDENT PRIVATE UNIVERSITY IN MACEDONIA

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Abstract. The objective of this study is to explore how the organizational culture as one of the most vital elements of any organization affects the success of an organization. In recent years, the organizational culture has become one of the most important areas of research. Researchers simultaneously examine the concept of organizational culture in different environments in order to develop credibility and productivity in the workplace. The effectiveness of a university and how well it operates depend, to a large extent, on how the university culture is formed. This research examines and takes in consideration the 6 Hofstede's cultural dimensions: process-oriented versus results-oriented; employee-oriented versus job-oriented; parochial versus professional; open system versus closed system, loose versus tight control, and normative versus pragmatic. The paper determines the dimensions that better represent the organizational culture of an independent private university. The study attempts to explain the effect on this university's culture, as well as the implications in administering this system which contributes in fulfilling the mission and vision, as well as its impact in developing and realizing the strategic objectives of the university itself.

JEL classification: C88

Keywords: Organizational culture; Staff; Hofstede's cultural dimensions; SEEU

1. Introduction

Corporate culture refers to the way the members of an organization behave in accordance with what they believe and value, and in accordance with the organization's goals and objectives. The organizational culture is very important since it guides the success and the performance of any organization towards the attainment of its objectives. The organizational culture is very important for universities as it helps them have effective management practices (Beytekin, et al., 2010).

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According to Camerer and Vepsalainen (1988), a corporate culture is a set of broad tacitly understood rules which lead employees performing tasks that occur under different circumstances. A corporate culture specifies tasks and rules in an organization, which helps managers solve eventual problems (Camerer & Vepsalainen, 1988). Nevertheless, the management of culture refers to implementing and updating elements of the existing culture, or changing the outdated culture (Schein, 1992).

A successful organisational culture needs to support the business in which the organization is (Tichy, 1982). Values and beliefs of internal stakeholders greatly affect the decision-making process in universities, and at the same time shape the individual and organizational behavior (Bartell, 2003). There are different stakeholders coming from different backgrounds. The different background of employees characterizes universities by disciplines and cultural diversity (Bartell, 2003).

It is important to be aware of the fact that when the term culture is used, it also means the subcultures that exist at all university levels. Thus, the overall culture of a university is influenced by administrative subculture, faculty subculture, and student subculture (Adams, 2014, p.6).

Organizational culture develops and manifests itself in different ways in different universities. Accordingly, universities should not only define their culture, they should also use and change it, as well as adjust it to the environmental changes.

This study mainly deals with the role of organizational culture as it defines the values and beliefs of the administrative and academic staff based on Hofstede's dimensions of organizational culture. A university culture is composed of shared values and processes that need to be in line with university goals and objectives. Therefore, this study will analyze the type of corporate culture shared by the members of the university. The six Hofstede's cultural dimensions: process-oriented versus results-oriented; employee-oriented versus job-oriented; parochial versus professional; open system versus closed system, loose versus tight control, and normative versus pragmatic are analyzed in order to find out if these dimensions are in line with university management's goals and objectives.

The organizational culture can be considered as a frame that has a very strong impact on decision makers. Within this framework, the paper attempts:

- to explore how the university members perceive the cultural dimensions of the organisation,
- to explore the university members' preferences for the cultural dimensions,
- to identify the strategies used by the institution in dealing with its environment and customers.

To analyze the university culture, the research relies on data collected from the academics and the administrative staff using a structured questionnaire.

The study aims to answer the following research questions:

1. What are the characteristics of the organizational culture of the surveyed independent private university?
2. How do the members of the university perceive the organizational culture?

2. Literature Review

Culture as a concept is used to denote different meanings in different disciplines, and due to its complexity, it is not easy to define. There have been many attempts in different disciplines, such as anthropology, sociology, and business to define the organizational culture. For example, from the anthropologists' perspective it represents the customs and rituals developed by societies (Schein, 2004). During the last decade researchers and leaders have continually explored the concept of organizational culture in different environments. Most of the scholars and academics agree that organizational culture is important for organizations. There are differencies when it comes to defining it because of the approaches that they take. Schein (2004) defines it as a pattern of shared basic assumptions that the group acquired them while solving problems during external adaptation and internal integration. These patterns have worked well enough to be considered valid and, therefore taught to new members as the correct way to perceive, think, and feel in relation to those problems.

Based on the study of the Australian public service, O'Farrell (2006) concluded that "statements of values, codes of conduct, principles of public service management and so on set out in rules and regulation are simply rhetoric" (p. 8). However, Watson (2006) argues that, the most important trend of management thinking in the lastest years is the encouragement of managers to create a strong culture for organizations.

In this context, Kuh and Whitt (1988) define culture as "persistent patterns of norms, values, practices, beliefs, and assumptions that shape the behavior of individuals and groups in a college or university and provide a frame of reference within which to interpret the meaning of events and actions on and off the campus" (p.6).

Geert Hofstede defines culture as "the collective programming of the mind which distinguishes the members of one group or category of people from another" (1991, p.5). Thus, organizations are made of people who share common values and have their own organizational culture.

Hofstede (1997) developed six dimensions of culture discussed below:

- *Dimension 1: Process oriented Vs. Results oriented*

This dimension represents a preference towards processes or results. As the name implies, a process oriented culture focuses more on technical and bureaucratic routines. In contrast, a result oriented culture focuses more on achieving the desired results and outcomes in order to meet the objectives of the company. Thus, in process oriented culture, people perceive themselves by avoiding risks and making only a limited effort in their jobs, —each day is pretty much the same. Results oriented people perceive themselves as comfortable in unfamiliar situations—each day brings in new challenges (Hofstede, 1997).

- *Dimension 2: Employee oriented Vs. Job oriented*

This dimension represents the preference of the culture towards employees or the job. Employees in cultures that are people oriented feel that their personal problems are taken into account and that the organization takes an obligation to take care of employees' well-being. On the other side, people in job oriented cultures experience a strong pressure to complete the job and perceive the organization as only interested in the work (Hofstede, 1997).

- *Dimension 3: Parochial Vs. Professional*

This dimension represents the way the members of an organization identify themselves. Members in organizations with professional culture, tend to identify themselves primarily with their professions. Members of parochial culture feel the organization's norms cover their behavior on the job as well as their home (Hofstede, 1997).

- *Dimension 4: Open system Vs. Closed system*

In open systems, members consider both the organization and its people. They are opened to newcomers and outsiders. In closed systems, the organization and its people feel closed, even among insiders (Hofstede, 1997).

- *Dimension 5: Loose control Vs. Tight control*

This dimension represents the amount of internal structuring in the organization. Employees in loose control units have more autonomy and different departments may operate without much coordination between each other. People in tight control units describe their work environment as closed. Supervisors know exactly what employees do, and management can coordinate all the activities of different departments according to a central strategy (Hofstede, 1997).

- *Dimension 6: Normative Vs. Pragmatic*

This dimension represents methods used by an organization in dealing with its environment and customers. To normative cultures people, following organizational procedures are more important rather than following the results. To pragmatic cultures people, following results and meeting customer needs is more important (Hofstede, 1997).

The culture of a university is a special type of organizational culture where values, beliefs and fundamental assumptions are considered common by the members of the university (Salonda, 2008). The culture of a university is formed by members who act as a group in line with the university's values in order to achieve its objective. In essence the university culture stems from three main sources: the beliefs, values and assumptions of the founders of the organization, and the experience of the group members during the evolvement of the organization. The culture of a university is created by the new beliefs, values and assumptions brought by new members and leaders.

According to Schein (1994), leaders are those who play a crucial role in shaping and strengthening a university culture. In a study conducted by Cameron and Freeman (1991) which compared cultures of 334 institutions of high education, found that the type of culture possessed by a university has an important relationship to the effectiveness, as well as to the organizational attributes.

Thus, a successful organizational culture needs to be in line with the university's goals and objectives. In the case of a university, all stakeholders must share the same values and beliefs that are culturally accepted by the university.

3. Methodology

The main purpose of this paper is to identify the importance of organizational culture and the extent to which employees share the common values of a university. It also compared the university's values to Hofstede's dimensions. The paper uses both primary and secondary data. The primary data are collected through a structured questionnaire, while secondary data are collected from secondary sources (books, textbooks, online articles, journals, and university websites).

The questionnaire includes statements related to Hofstede's six dimensions of organizational culture. The questionnaire was sent to 80 participants and distributed through the university's email accounts. Out of the 80 distributed emails 52 (40%) of the respondents replied to the survey. The questions asked respondents to rate the extent to which the administrative and academic staff shared the same values at their university. Specifically, questions assessed organizational effectiveness based on six Hofstede's dimensions. The structured questionnaire gave respondents the opportunity to indicate the type of culture that characterized the organization as it relates to Hofstede's six dimension.

The validity of statements that were included in the questionnaire were tested by SPSS software program. The research should reveal the organizational culture shared by its employees compared to Hofstede's cultural dimensions.

4. Data Presentation and Analyses

This section includes a systematic presentation of data obtained from the survey on the role of organizational culture in the fulfillment of the university's objectives. It also shows how the respondents' answers relate to Hofstede's cultural dimensions.

Table 1 provides the descriptive statistics of the respondents.

Table 1. Demographic characteristics of respondents

Individual characteristics		Frequency	Percentage
Gender	Male	35	67.3
	Female	17	32.7
Age	25-30	8	15.4
	31-35	15	28.8
	36-40	15	28.8
	41-45	4	7.7
	46-50	5	9.6
	More than 50	5	9.6
Education	Faculty	18	34.6
	Master	18	34.6
	Doctorate	16	30.8
Employment status	Academic staff	20	38.5
	Administrative staff	32	61.5

4.1. Hofstede's Cultural Dimensions

Employees were asked to answer the structured questionnaire indicating the degree to which they agree with statements related to Hofstede's cultural dimensions. Employees were asked to answer the statement from the questionnaire by using a five point Likert scale : *1= Strongly disagree, 2= Disagree, 3= Neutral, 4= Agree, 5= Strongly agree*

- *Process oriented versus results*

Table 2 below shows the results of employees' response to the question on the university culture as it relates to process or result orientation.

Table 2. Process oriented versus results oriented

	N	Mean	Std. Deviation
Q1. The staff always gives the maximum in their duties.	52	3.97	.99
Q2. We often face new challenges at work.	52	4.00	1.01

This dimension represents a preference for a culture towards processes or towards results. This dimension shows the opinion of the respondents concerning the inclination of their university culture being more inclined towards processes or more towards achieving results.

Table 2 shows that the staff always gives the maximum in performance of their duty with a mean of 3.97. This means that employees are more focused on processes, i.e., their duties. Concerning the second question of this dimension, that is whether the staff often faces challenges, it can be noticed that the majority of respondents agree with this statement that the staff often faces new challenges at their work, with a mean of 4.0.

Taking in consideration process oriented versus results dimension, as well as the mean value of responses from employees, it can be concluded that the staff is focused on achieving specific results, i.e., university goals and objectives. Namely, providing a multilingual and multicultural approach to teaching and research, and by developing study programs according to the broad European and international standards (http://www.seeu.edu.mk/en/about).

- *Employee oriented versus job oriented*

Table 3 below shows the results about employees' responses regarding the university culture towards employees or towards jobs.

Table 3. Employee oriented versus job oriented

	N	Mean	Std. Deviation
Q3.The university cares only for the work that the staff performs	52	3.57	1.06
Q4. The university cares very little about the personal problems of the staff	52	3.21	1.17
Q5. A very little attention is paid to the working environment	52	3.38	1.36
Q6. The management pays more attention to operational issues and less on managerial issues	52	3.92	.92

This dimension of organizational culture is mostly related to the philosophy of management. There are four statements in the questionnaire mainly related to this dimension. It shows whether a university culture is more employees oriented or more job oriented.

As it can be seen on table 3, the results show that the university cares only about the work performed by the staff, with a mean of 3.57 of responses. The staff also thinks that the university is not concerned about the personal problems of the staff, but about the work performed by the staff. The mean response to this statement is 3.21.

The next two questions from this dimension are related to the level of attention that management pays to the working environment of employees and the level of attention that management dedicates to the working environment. The results, with the mean 3.38, show that respondents do not think that the university pays attention to the working environment. In terms of how much attention management pays to managerial and operational issues, the respondents' means is 3.92. Thus, the participants think that the university's management pays more attention to operational issues and less on managerial issues.

In sum, taking in consideration the dimension in question, it can be concluded that the organizational culture of the university represents a culture where the management cares more about the work of staff rather than the staff. Moreover, staff members continue to feel that their personal problems are not properly considered by the management of the university.

- *Parochial versus professional*

Table 4 below shows the results of employees' responses regarding the way members of university identify themselves with their profession or with the organization.

Table 4. Parochial versus professional

	N	Mean	Std. Deviation
Q7. Cooperation and confidence between departments is at an appropriate level	52	3.92	1.17
Q8. Changes are implemented in coordination with the staff requirements	52	3.42	1.32
Q9. Our management attempts to support staff in further promotion	52	3.57	1.36
Q10. We always get feedback from supervisors for our performance	52	3.85	1.09
Q11.Supervisors are mostly interested on the undertaken initiatives than the results	52	3.54	1.13

This dimension of culture deals primarily with long-term or short-term orientation of employees. There are five statements for this dimension that employees need to assess depending on the level of compliance. The results in table 4 show that respondents agree that there is confidence and cooperation between departments with a mean of 3.92 of their answers. Respondents with a mean of 3.42 think that changes are implemented in coordination with the staff requirements. Majority of respondents with a mean of 3.57 think that the management of the university makes effort to support its staff in their further promotions. Furthermore, the results show that respondents with an average statement of 3.85 agree with the fact that supervisors offer them feedback. Concerning the statement that the supervisors are mostly interested in taking initiatives than in results, it can be seen from the result in table 4 that respondents agree with a mean of 3.54 in their responses.

Based on the mean scores of responses received, it can be concluded that the university is focused on professionalism, where each employee considers the personal life as an issue that belongs only to them. Employee selection is based on the competences they possess. Thus, the orientation of the organizational culture is related more with professional dimension because the members tend to identify themselves primarily through their professions.

- *Open system versus closed system*

Table 5 shows the results of employees' responses regarding the way the members of university identify themselves with their profession or with the organization.

Table 5. Open system versus closed system

	N	Mean	Std. Deviation
Q12. We are open for the new staff and for the jobseekers	52	3.50	1.31
Q13. New staff quickly finds support to adapt at work and within the team	52	3.83	1.16
Q14. New staff needs only a few days to adjust to the working environment	52	3.92	1.06

This dimension has to do with the openness of the university to newcomers. The results for the first question show that the university is always open and interested in new staff – the mean 3.50 score from the respondents who agreed with this statement. The results also show that respondents agree with the second statement with a mean of 3.83. Furthermore, the results for the last statement with a mean of 3.92 show that the new staff needs only a few days to adapt to the working environment.

Based on the results for this dimension, it can be concluded that the university's organizational culture is completely oriented to open system. The newcomers are welcomed, which means everyone adapts quickly to team work, and needs only a few days to become fully integrated into the university environment.

- *Loose versus tight control*

Table 6 shows employees' response regarding the amount of internal structuring in the organization.

Table 6. Loose versus tight control

	N	Mean	Std. Deviation
Q15. We always come late at the during the appointed time of the meetings	52	3.30	1.55
Q16. We very rarely bring to mind the work costs (materials, equipment, etc.)	52	3.14	1.38

The fifth dimension of Geert Hofstede refers to the internal structure, control and discipline. The first statement of this dimension deals with delays during meetings. The results obtained from table 6 show that respondents agree with a mean score of 3.30 that they come late to meetings. The results from the second statement show a mean score of 3.14 that employees very rarely bring to mind the work costs. Based on the responses that correspond to the level of compliance, it can be said

that current organizational culture of the university, is oriented to be more flexible because employees do not think too much about the costs, and there is flexibility towards deadlines in the workplace. This means that employees feel comfortable and relaxed in their working environment.

- *Normative versus pragmatic*

Table 7 shows employees' responses regarding the methods used by the organization in dealing with its environment and customers.

Table 7. Normative versus Pragmatic

	N	Mean	Std. Deviation
Q17. The university does not give very significant contribution to the society	52	3.60	1.41
Q18. We are more pragmatic than dogmatic	52	3.60	1.04

The last dimension of Geert Hofstede's organizational culture to be examined is whether the university is oriented towards normative or pragmatic approach. The majority of respondents, with a mean score of 3.60, think that the university does not provide a very significant contribution to society. The means score 3.60 on the last statement of the questionnaire regarding whether the university is more pragmatic than dogmatic. The culture of the university is seen as being more pragmatic than dogmatic, where the main focus lies on the fulfillment of needs of customers, i.e. students.

4.2. The Reliability Statistics

The Cronbach alpha

Cronbach's alpha is a measure of internal consistency, that is, how closely related a set of items are as a group. It is a measure of scale's reliability.

Table 8. Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.789	.791	18

The alpha coefficient for the eighteen items is .789, suggesting that the items have relatively high internal consistency. The reliability coefficient of .70 or higher is considered "acceptable" in most social science research situations.

5. Conclusions

The culture cannot be created individually, therefore a university culture cannot be formed by individuals, but it can be formed collectively by accepting the values that play a crucial role in creating and building a university culture. First of all, the corporate culture that makes SEE University represents a multiethnic understanding, multilingual and multicultural approach to teaching and research.

Secondly, SEE University staff continues to respect the standards of communication in order to achieve the qualitative communication with students, the staff, and with other university stakeholders. SEE University aims to enforce satisfaction, the quality of communication standards between administrative and academic staff, as well as fulfilling the expectations of students. In addition, SEE University culture is based on the three main sources, such as: beliefs, values and assumptions of the founders and the experience of the group members.

The obtained results of employees also demonstrate that SEE University makes a combination of Hofstede's dimensions, but the focus is more on achieving specific goals and results. The staff members continue to feel that their personal problems need to be considered more by the university as a responsible body for the welfare of its employees.

Thirdly, the current SEE University organizational culture is focused on professionalism and toward the opened system, where each employee considers their personal lives as an issue that belongs only to them. The selection of employees is based on the competences they possess, which means that the orientation of SEE University organizational culture aims at long-term period and professionalism. Newcomers are immediately welcomed, which means everyone adapts quickly at team work, and they need only a few days to become fully integrated into SEE University.

Fourthly, the current SEE University organizational culture is flexible towards deadlines and the prevalence of informality in the workplace. Employees feel comfortable and relaxed in their working places. Finally, the current organizational culture of SEE University is pragmatic where the main focus lies in the fulfillment of needs of customers, i.e. students, and the results are more important than the correct procedures. In terms of business ethics, a pragmatic attitude dominates.

However, this survey does not take into consideration all employees of the SEE University. Thus, any increase in the sample would enhance even more the validity of the results, which also would serve for comparing the SEEU organizational culture, with other universities, whether private or public, and to see more closely the implications of Hofstede's dimensions with university practices.

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TEACHERS' MOTIVATIONS AND EXPECTATIONS REGARDING LIFELONG LEARNING

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Abstract: The global contemporary economic and social context, in constant change, makes the learning process undergo constant structural changes with profound implications. These transformations also influence practices, principles and methods used in the field of learning and teaching. The present research is focused on the motivations and expectations of teachers regarding lifelong learning. Their main motivator is to improve teaching tools, techniques and methods. The study population consists of educators who teach the national language and literature (Romanian) to national minorities (Hungarian, German, Roma, Tatar, Serbian, Ukrainian, etc.) and to migrants from various states. The respondents have participated in a lifelong learning program.

JEL Classification: I26, I29, M31, M53,

Keywords: education, lifelong learning, information sharing, technological change, new teaching techniques

Introduction

Teachers should receive permanent support for continuous training throughout their careers. At the same time, they should be encouraged to develop or strengthen their abilities of transmitting lifelong learning principles to students. These principles are otherwise stated by EU regulations on lifelong learning (European Commission, 2014) and by the provisions of UNESCO (UNESCO, 2014; Tate et al., 2011). In view of these principles, Babeș-Bolyai University has organized courses for those teachers who teach Romanian to national minorities or immigrants (Dabija and Pop, 2014; Dabija et al., 2017). Some of the goals of these courses include helping teachers adequately structure learning units, rigorously construct lectures, create useful training courses, use

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valuable real life examples, enhance the attractiveness of classes, stimulate course attendance, increase class interactivity. These topics are consistent with literature (Finsterwalde and Wagner et. al., 2013), which considers necessary the introduction of a new way of teaching.

In the present research, the authors have focused on exploring the interests of participants in lifelong training courses. Lifelong education involves effective use of many learning resources and of a complex and diverse didactic infrastructure, which is represented not only by planning or technical equipment, but also by worksheets, practical examples, case studies, etc.

1. Lifelong Learning

Rapid changes in contemporary society, caused by new phenomena and processes, such as globalization, with its multiple facets, lead to modifications in the educational processes as well. Their rhythm sometimes exceeds the ability of humans and institutions to adjust to the modern world. The relationship between the new knowledge-based economy and the need to apply the principles of lifelong learning is already well known and studied in the literature (Laal and Salama, 2012). Its aim is to make people more efficient and more flexible. Most often it refers to adapting the capabilities of individuals or social groups to the dynamism of economic life and to the socio-economic transformations present everywhere. The allocation of lifelong learning responsibilities is part of the revised Lisbon Agenda (Rodrigues, 2006). Currently, we witness a continuous readjustment and renewal of all standards, regulations, procedures and forms of learning. Even if they are not always adapted to local or traditional education, they need to excel through increased efficiency of their activities, but also to meet the challenges of the new society, whose values are in constant evolution and transformation. It is also necessary to provide specific learning infrastructure, to create and diversify learning opportunities, to facilitate labor market integration and entrepreneurship and to monitor the whole learning process so as it follows practical goals (Rodrigues, 2006).

The need for continuous readjustment of the learning process has generated a “storm” of ideas and concepts in the literature, on the role of lifelong learning. Klug et al. (2014) have long ago reported the difficulty or even impossibility to develop an indicator or a set of indicators to measure teachers’ competence in promoting lifelong learning principles among students. It is also difficult to estimate the impact of training courses on the society and on teachers’ skills and knowledge (Belás et al., 2015; Bodea et al., 2015; O'Leary, 2015).

Lifelong learning can be defined as the totality of individuals’ specific activities, regardless of age, for self-improvement, for assimilation of new knowledge, for acquiring or enhancing their skills and abilities in various fields, to facilitate access to employment, career advancement, recognition from peers, and social prestige (Klug et al., 2014). In the process of lifelong learning, two very important dimensions must be considered: self-control and motivation, which are, at the same time, antagonistic and complementary to each other. Self-control has mainly individual-organizational dimensions, resulting largely from individuals’ personal skills to cope with certain situations. In practice, self-control depends on the various aspects of people's motivation to act or follow a certain path (Bolhuis, 2003). Therefore, these two dimensions interfere, generating a relationship of interdependence, which can give rise to many practical facets of the whole learning process.

2. Motivations for Lifelong Learning Involvement

The educational system, based on the principles of learning throughout the entire life, is characterized by a series of deep strategic mutations (Demirel, 2009). In fact, lifelong learning is an open system of courses and training activities, addressed to target groups with needs, socio-demographic and professional characteristics that are more and more varied. Accessing lifelong learning courses of various organizations (universities, schools, research and training centers affiliated to public or private organizations, etc.) leads to increased chances of promotion, timely adjustment to new realities, gain of new information and/ or knowledge or even re-education of participants. Through partnerships and cooperation among educational institutions, the appropriate framework to ensure continuity of adult learning and training throughout life is created. This avoids depreciation of the useful content of information transmitted (Pelău et al., 2011).

A major advantage of lifelong learning processes is that it is no longer confined to certain special periods allotted to such activities. Instead, it is ongoing, addressing more and more diverse and complex issues. One difficulty in the proper implementation of lifelong learning is the monitoring of knowledge assimilation and the certification of such training cycles (Băcilă et al., 2014). On the one hand, involvement, merits, acquisition of knowledge, skills and/ or abilities of participants should be recognized, while on the other hand issuing diplomas or certificates, acknowledged by various authorities and/ or public or private organizations should be considered (Pocatilu and Ciurea, 2011). Organizing such courses under the auspices of a university and the collaboration with ministries and/ or competent authorities for official acknowledgement is often a viable way of attracting and maintaining an increased interest among potential beneficiaries of such trainings (Sălcudean et al., 2014).

The interest in active lifelong training has a greater relevance now, due to the rapid pace of changes in contemporary society and economy. Mutations in the sphere of innovation (Postelnicu and Dabija, 2015), enhanced technological change, ease of remote communication and the speed of information dissemination have caused profound changes in the educational process as well. Lifelong education is far from being safe from the waves of globalization of economic and social life. It must meet the challenges of an evolving environment, where information is subject to ongoing impairment. Therefore, it requires a periodic update of the spectrum of information and knowledge (Demirel, 2009). Thus, for example, school teachers, doctors, lawyers or other socio - professional categories must attend regular training courses and accumulate a certain number of professional credits.

Active participation of learners in lifelong education programs largely depends on their *motivations* (Duke and Hinzen, 2014). The desire for self-improvement, for updating professional knowledge, for getting practical experience, for collaboration with other colleagues, for certificates or financial rewards, existing national standards or procedures of revaluation within organizations, etc. may be thorough reasons for attending lifelong training courses. In creating lifelong education courses, organizers must correlate these motives with the socio-demographic characteristics of participants (income, age, gender, skills level, teaching degree etc.), so that the formed groups are as heterogeneous possible, for effective and efficient learning (Blanden et al., 2012). There are several studies

(Collinson and Cook, 2004; Galvez et al., 2016) on the motivations of teachers to attend training courses. Collinson and Cook (2004) identify 43 motivational factors in teachers' activity, but also many barriers that prevent them from participating in lifelong education.

To increase the efficiency and usefulness of training programs throughout life, attitudinal, physical, material or structural *barriers* must be considered (Laal, 2011). *Attitudinal* limitations refer to the lack of interest or motivation of students. Issuing diplomas, certificates, credit points or prizes may counteract or minimize these risks. Learning deficiencies can be corrected in time, but the general attitude of the students on learning, especially at an old age, is often problematic (Helterbran, 2005), since it largely depends on their inner stimuli. *Physical or material barriers* pertain to difficulties to cover the actual costs of the educational process, to burdensome access to information or learning resources, etc. (Dinu, 2010; Dabija et al., 2014). These problems can also be overcome by building partnerships with universities and other educational institutions to attract experienced trainers, constantly seeking to upgrade their learning resources or to develop new ones. The costs of organizing and carrying out training projects may also be covered from various external sources, such as European, national or local funds, but also through partnerships with companies or other organizations. *Structural barriers* are caused by lack of specialized training, by constraints to access superior hierarchical positions (Helterbran, 2005). Each of these groups of factors is likely to influence, with various intensities, at certain times, the learning process. But they can also sometimes obstruct access of adults to superior knowledge and/ or self-improvement.

Kinash et al. (2015) emphasized the structure and level of response from students in evaluating the performance of the educational process, revealing, based on data provided by schools, measures to improve quality, performance indicators, feedback methods, actions for better involvement of target segments in the educational process, use of information techniques. Even though in certain stages of professional development, the renewal and improvement of knowledge depend exclusively on the capabilities of the employer organization, school remains the founder of an individual's set of knowledge, abilities and competences. Individuals' desire to involve in continuous learning also depends on how captivating school years have been.

3. Research Methodology

The aim of the current research is to identify teachers' motivations and expectations regarding continuous training programs. The relevance of these courses for acquiring knowledge, competences and skills is also of interest. With these purposes in view, the authors have appealed to a representative quantitative empirical research. In this regard, the opinions of participants to training courses funded by the European Union have been analyzed. The subject of the training program has been improving the knowledge of those educators who teach Romanian to national minorities (Hungarian, German, Turkish, Tatar, Serbian, etc.) and to migrants from other states in primary, medium and high schools, in special or vocational schools, etc. The training courses have been organized by country's largest university, Babeș-Bolyai University of Cluj-Napoca.

All participants in the final conference of the training program, 1,300 in all, have filled in the questionnaire. Out of these, 1,200 have been validated. Given that responses from all teachers (total research) have been yielded, no statistical sampling has had to be carried out. Regarding the structure of the sample of teachers, most of them are females (95.2%), primarily aged between 30 and 39 years old (45.8%). The relatively low presence of males in the sample is determined by the small number of male Romanian language teachers.

Table 1. Distribution of teachers in the sample by age and gender or type of school area

Gender/ Area	**Age groups**				
	Under 30 years	30 - 39 years	40 - 49 years	50 - 59 years)	**Total**
Male	0.1%	2.0%	1.5%	1.2%	**4.8**%
Female	9.8%	43.8%	33.0%	8.5%	**95.2**%
Total	**9.9**%	**45.8**%	**34.5**%	**9.8**%	**100.0**%
Urban	4.5%	24.0%	19.5%	5.6%	**53.6**%
Rural	5.6%	21.5%	15.3%	3.9%	**46.4**%
Total	**10.1**%	**45.5**%	**34.8**%	**9.5**%	**100.0**%

Teachers participating in this research come from different types of schools, both primary and medium or high (secondary), special schools, pedagogical, theoretical, technological, theological or vocational high schools and colleges. The breakdown of respondents by type of schools of origin is displayed in table 2. Most participants in the survey come from middle schools (67.7%), technological (11.2%) or theoretical (9.2%) high schools.

Table 2. Distribution of respondents by type of institution and teaching degree

Type of institution	School center for inclusive education	Technologi-cal high school	Theo-retical high school	Middle school	Primary school	Others (pedagogi-cal, theological & vocational (arts, sports) high schools)	**Total**
Responses	6.2%	11.2%	9.2%	67.7%	2.6%	3.1%	**100**%

The training program consists of 11 modules, a participant attending a maximum of three such courses. The modules have been compiled based on the training needs of the target group. The themes have been divided per school cycles (primary, medium and high school), and based on skills acquired: the process of teaching/ learning; evaluation process; design, organization and evaluation of educational activities; multicultural education and ICT. The modules are: Teaching and learning process of Romanian language to national minorities in primary, middle or high school; The evaluation process of the Romanian language to national minorities primary, middle or high school; The design, organization and evaluation of educational activities in primary or secondary education; Multicultural education for primary or secondary education; ICT for teachers of Romanian language to national minorities - intermediate level.

Table 3. The distribution of respondents by age groups and number of training programs attended

	Age groups in years (%)					School area (%)		
Number of programs*	**Under 30**	**30 - 39**	**40 - 49**	**50 - 59**	**Total**	**Urban**	**Rural**	**Total**
One	2.8	14.2	9.7	2.8	**29.4**	15.6	14.1	**29.7**
Two	0.7	8.7	7.8	1.8	**18.9**	9.7	9.2	**18.8**
Three	0.2	2.3	2.6	1.2	**6.2**	3.9	2.4	**6.2**
None	6.3	20.8	14.3	4.1	**45.5**	24.5	20.8	**45.2**
Total	9.9	45.9	34.4	9.8	**100.0**	**53.6**	**46.4**	**100.0**

* Number of programs – the number of programs attended by the respondents

Of the 1,200 respondents, 45.5% have not attended any of the training programs, but have been accepted at the final conference of the project (table 3). Most of the respondents attending training courses have participated in one (29.4%), while 18.9% have participated in two and just 6.2% in three modules. The ranking based on the number of programs attended is the same for the overall sample and for each age group or school area (see table 3) and for each school type (see table 4).

Table 4. Distribution of respondents by type of schools and number of training programs attended

Type of institution/ number of programs attended	**One**	**Two**	**Three**	**None**	**Total**
School center for inclusive education (special school)	1.3%	1.1%	0.5%	3.4%	6.3%
Technological high school	3.7%	2.0%	0.3%	5.0%	**11.0%**
Theoretical high school	2.7%	1.6%	0.7%	4.5%	**9.4%**
Middle school	20.7%	13.0%	4.0%	29.7%	**67.5%**
Primary school	0.7%	0.5%	0.3%	1.4%	2.9%
Others (pedagogical, theological & vocational (arts, sports) high schools)	0.8%	0.6%	0.4%	1.2%	3%
Total	**29.7**%	**18.8**%	**6.2**%	**45.2**%	**100**%

Data Analysis

Motivations for lifelong learning are the reasons leading the participants to enroll in lifelong education courses. The research results regarding these aspects are presented in table 5. This table shows the major groups of reasons openly expressed by the participants, also highlighting the hierarchy of their importance.

Many participants (24.38%) have indicated as the main *motivation* for attending these training programs the opportunity to improve their knowledge on teaching - learning - evaluation of pupils belonging to national minorities. By participating in this training program, teachers can keep up with the latest news, can become students once

again. Meanwhile, participants (13.25%) are stimulated by the possibility to assimilate new methods, techniques and effective and innovative ways of working with Roma, Hungarian or German children. Many of the participating teachers (13.04%) are looking for self-improvement, professional progress, skills and knowledge development.

Table 5. Hierarchy of the reasons for teachers' participation in training programs

The reasons expressed by teachers for attending training programs	**Option 1 (%)**	**Option 2 (%)**	**Option 3 (%)**	**Total (%)**
Accumulation of new and applicable knowledge, skills, experience, information	**11.43**	**7.56**	**5.39**	**24.38**
New methods, techniques and styles of teaching (learning) minorities the Romanian language	**6.00**	**5.06**	**2.19**	**13.25**
Lifelong education, professional and personal development, training, advancement	**6.55**	**3.66**	**2.83**	**13.04**
Prize (financial motivation)	0.61	2.13	5.97	**8.71**
Exchange of experience ideas, practices; interaction with fellow teachers/ trainers, networking	0.70	3.17	3.41	**7.28**
Access to the materials made available (online, audio, video, written, etc.)	**1.31**	3.44	1.92	**6.67**
Transferability of knowledge/methods/teaching skills, gaining a new vision on teaching	**1.55**	2.01	2.01	**5.58**
Curiosity	**2.44**	1.25	1.10	**4.78**
Transferable credits	0.34	1.49	1.61	**3.44**
Course content	**1.13**	1.31	0.55	**2.99**
Difficulties in teaching minorities the Romanian language due to lack of teaching materials	**1.43**	0.85	0.18	**2.47**
Previous programs attended	1.01	0.40	0.24	**1.65**
Course location/ the prestige of Babeș-Bolyai University	0.18	0.61	0.67	**1.46**
The usefulness/ applicability of the training program	0.55	0.49	0.27	**1.31**
Recommendations from previous participants in the program	0.61	0.27	0.06	**0.94**
Efficiency, reliability, quality of the project team, good and open trainers, interactivity	0.27	0.24	0.24	**0.76**
Gratuity of courses	0.06	0.27	0.12	**0.46**
Diploma/ certificate issued	0.03	0.15	0.15	**0.34**
Interactive, useful activities that include adaptation of learning content to the new requirements	0.15	0.12	-	**0.27**
Professionalism of trainers	-	-	0.12	**0.12**
Re-experiencing student life	-	-	0.06	**0.06**
Critical thinking	0.03	-	-	**0.03**
Total	**36.38**	**34.49**	**29.13**	**100**

Teachers' main motivational dimensions may be revealed by analyzing their satisfaction with the training program they have attended. There are four main dimensions that outline their perception on the satisfaction generated by the courses organized by Babeș-Bolyai University. They have been identified using Factor Analysis – using as extraction method the Principal Component Analysis. These components have been named: content of lectures (LECT), timetable (TIME), other materials and information (MAT) and administrative issues (ADM). These four components explain 65.5% of the total variance. KMO test (0.923, chi square 11275.520) and Bartlett's test of sphericity (df = 153, sig = 0) confirm model's reliability. Therefore, once again, it is demonstrated that teachers' main interest regarding lifelong education is related to the content of the lectures and of the additional materials (platform, course outline, other information provided). Organizational aspects (timetable and project administration) are considered facilitators for information access.

Table 6. The components of satisfaction resulted by using Factor Analysis

Factors	Component			
	LECT	TIME	MAT	ADM
Information disseminated during lectures.	0.798			
Examples provided by lecturers.	0.778			
Lecturers.	0.752			
Teaching method.	0.743			
Content of formation programs.	0.614			
Power Point presentations.	0.571			
Applicability of the themes chosen.	0.567			
Ending time.		0.822		
Duration of education programs.		0.787		
Starting time.		0.755		
Breaks.		0.666		
Interactions on the platform with the tutors.			0.779	
The platform in itself and its usefulness.			0.732	
Courses materials.			0.716	
Portfolio of materials.			0.603	
Expertise of administrative personnel of the project.				0.845
Seriousness of administrative personnel of the project.				0.823
Project management.				0.788

Notes: Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.

Looking at the top training programs, it is easy to understand what type of information and competences teachers are looking for in continuous training. The major interest of participants is shown towards training programs that enhance their teaching abilities of Romanian to national minorities (P1 – 47.7% and P2 - 8.3%) and towards the inclusion of ICT skills in teaching - learning – evaluation (P11 - 17.3%).

Table 7. The breakdown of respondents by type of training programs attended

Learning program	% of attendants to courses
P1	**47.7**
P11	**17.3**
P2	**8.3**
P4	8.1
P7	6.5
P9	5.1
P3	3.2
P5	1.5
P6	0.8
P10	0.5
Total attendants	**100.0**

Regarding the *expectations* of those attending the project, a strong divergence of opinions may be noted. The expectations head towards acquiring new teaching tools, techniques and methods that could be used in teaching Romanian language to national minorities. Respondents agree that all instruments - the bank of words, the various new forms of approach, the use and application of ICT in teaching, the didactic films or audio-visual materials find maximum applicability in their classes. Furthermore, teachers express their expectations in terms of different teaching methods and strategies of teaching-learning-examination, specific for teaching Romanian language in classes with students of national minorities.

It is important for them that all these modern and interactive methods enable effective results and appeal to students. Several participants expect to learn practical exercises (case studies etc.) that they can apply, multiply or complete later. Teachers' expectations also refer to the adaptability of new methods at all educational levels - primary, medium and high, to technical or special schools or to training courses for immigrants and minorities. At the same time, expectations refer to finding some "innovative" ideas for teaching, which would support the efficiency of the teaching - learning – evaluation process. Another major hope refers to finding new good practices from fellow teachers' work experience. Other anticipations refer to the possibility to participate in original and practical activities that would help them in the process of teaching, to socializing with colleagues, to identifying new approaches and ways of working with students, etc. Anticipations also relate to organizational aspects. Thus, some respondents hope that these courses would be organized in other locations as well, would not take too long, would be facile and the reward or diploma could be obtained without great effort, while accommodation would be convenient and they would be offered the opportunity to socialize even more.

4. Conclusions

Studying teachers' expectations and motivations can serve to improving future professional and personal development training courses. They can be better adjusted to meet efficiency goals, better tailored to the ideals of various categories

of students. The research reveals that the main motivation and expectation of teachers for participating in training courses is to optimize and modernize their teaching process, to acquire new teaching methods and tools and, in general, to develop their own professional expertise.

The main limitation of this study is that all the respondents are participants to a training program, which increases the homogeneity of the sample and the probability that all of them are interested in professional development. It would be interesting to find out motivations among all teachers, regardless of their previous participation to training courses. Also, since the participation in the project has been motivated by a financial reward, it would be relevant to test the sincerity of the answers. Whether the main motivation is learning, indeed, could be tried by inviting teachers to attend paid courses. Another future research direction is represented by the study of barriers to lifelong learning and of the ways they could be minimized or eliminated.

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SUPPLY CHAIN MANAGEMENT AND CUSTOMER SATISFACTION IN SMALL TO MEDIUM ENTERPRISES

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Abstract: To circumvent the possibility of business failure, small to medium enterprises in emerging economies face mounting pressure to increase the satisfaction of their customers. The adoption of supply chain management practices is critical to the provision of quality products and services as well as the satisfaction of customers by small to medium enterprises. This paper investigated the relationship between customer satisfaction, supply chain management practices and three input factors; namely, product quality, flexibility and product variety in small to medium enterprises. The study adopted a quantitative approach in which a four section questionnaire was distributed to 131 managers in small to medium enterprises based in Gauteng Province, South Africa. Hypotheses were tested using regression analysis. The results of the study revealed that product quality and flexibility predicted supply chain management practices. Supply chain management practices were also statistically significant, and mediated the relationship between customer satisfaction and product quality and flexibility. Based on these results, conclusions were drawn and appropriate recommendations were made.

JEL Classification: L1

Keywords: Product quality, flexibility, product variety, supply chain management practices, customer satisfaction

1. Introduction

That small and medium enterprises (SMEs) are renowned drivers of economic growth in emerging economies such as South Africa is a long-established fact. SMEs are well known for their contributions to the development and survival as well as revenue generators to any economy (Rosenbusch, Brinckmann and Bausch, 2011). Even so, government, institutions, practitioners, as well as researchers have extensively commended and acknowledged the importance of SMEs as contributors to economic growth in terms of poverty alleviation (Sui, Lin, Fang and Lui, 2006),

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reduced unemployment through job creation (Bhutta, Rana and Asad, 2008), and innovators of new product and services as well as technological advancement (Shin and Lee, 2013). However, it has been observed that the survival and the continued existence of SMEs strongly depends on their ability to fully integrate supply chain management (SCM) practices in a strategic manner in order to provide quality products and services, and to provide product varieties that satisfy the dynamic needs of modern-day customers (Kim, Cavusgil and Cavusgil, 2013; Sharifl *et al.,* 2013).

Customer satisfaction is the key to SME business growth and continued existence (Chow, 2014; Sun and Kim, 2013). It has been identified as the key indicator that differentiates between high or successful business performance and a low or unsuccessful business performance within the business environment in present-day South Africa (Sharifl *et al.,* 2013). In other words, when a customer is satisfied, there is a strong possibility that the customer might become loyal, which results in the improvement of organisational performance (Terpstra and Verbeeten, 2014). A chain of customers is established through word of mouth as a result of customer satisfaction derived from the product or service supplied by a particular organisation (Subramanian *et al.,* 2014). SMEs in South Africa therefore face the challenge of adopting appropriate strategies necessary to satisfy their demanding customers.

The aim of this paper is to examine the relationship between customer satisfaction, SCM practices and three input factors, namely product quality, product variety and flexibility among SMEs in South Africa. There are several perspectives that attempt to address the issue of best practice in terms of customer satisfaction strategies. Noteworthy ones include *inter alia;* the SWOT analysis (Horn and Pesonen, 2014), Resource-Based View (RBV) (Nath, Nachiappan and Ramanathan, 2010; Wong and Karia, 2010), Outsourcing (Mukherjee Gaur and Datta, 2013; Schwarz, 2014), Materials Management (Lindahl, Robert, Ny and Broman, 2014) and Total Quality Management (TQM) (Agus and Hassan, 2011; Todorut, 2012; Bon and Mustafa, 2013). A notable aspect though, is that none of these strategies addresses the relationship between strategic SCM practices and product quality, product variety and flexibility as business strategies that could enhance customer satisfaction. Besides, the current study is based on the South Africa context rather than Europe, USA or Asia, which provides an element of novelty and fresh perspectives from a hitherto overlooked geo-spatial context. The study is significant in that it adds new literature to the existing body of business management literature on supply chain strategy, quality, variety and flexibility among SMEs. Also, the results of the study have practical implications for SME owners/managers and managers of larger organisations as well as shareholders within the business environment in terms of customer satisfaction through the adoption of SCM practices.

2. Literature Review

Product Quality

For the purposes of this study, the concept of service quality in the supply chain is defined as the overall consumer impression/perception of the products and services provided within that supply chain (Prakash, 2011). In order for an SME to compete effectively and to gain a sustainable advantage over its competitors, it is necessary to improve the quality of its products and services (Sohal, Netto, Fitzpatrick and

Noori, 2001). Product and service quality is a powerful tool to improve an SME's performance and growth. Mentzer, Flint and Hult (2001) advocate that since the quality of products offered within a supply chain has a significant impact on revenue and profitability, it is important to adopt any strategy that leads to improvements in product quality. As a result, SMEs are redesigning their business strategy to incorporate a SCM strategy to achieve a high level of customer satisfaction through product and service quality (Coyle, Bradi and Langley, 2003). On the one hand, a study conducted by Saura, Frances, Contri and Blasco (2008) found out that the two major effects of high quality SCM products and services are satisfaction and loyalty within customers. On the other end, poor SCM product and service quality may lead to the lack of access to innovation and expertise, which may result in customers switching over to substitute products (Ballou, 2004; Louw and Venter, 2006). Based on the aforementioned aspects, it is logical to envisage a positive relationship between the quality of products and services and the adoption of SCM practices within an SME supply chain. This leads to the following hypotheses:

Ho_1: There is no relationship between the quality of products and services and the adoption of SCM practices in SMEs.
Ha_1: The higher the quality of products and services, the easier the adoption of SCM practices in SMEs.

Flexibility

Flexibility may be perceived as an attribute of a system's technology or the SMEs ability to cope with uncertainty, and to adapt or respond to changes (Tachizawa and Gimenez, 2010). According to Choy *et al.* (2008), increasing flexibility in the supply chain can be regarded as a strategy for improving the system's responsiveness to change. Flexibility is also required to face increasing variety in its environmental needs and expectations without incurring excessive costs, time, organisational disruptions and performance losses (Zhang, Vonderembse and Su Lim, 2003; Narasimhan, Talluri and Das, 2004; Sanchez and Perez, 2005). Basic supply chain flexibility occurs with regard to machines, material handling, operations, automation, labour process, routing, product design, delivery, volume, expansion, programming, production and market flexibility (Duclos Vokurka and Lummus, 2003, Gong 2008). Quick responses to customer orders are the reason for the implementation of a SCM strategy in the increasingly competitive environment (Ahmed, Hardaker and Carpenter, 1996). As a result, SMEs are seeking to enhance flexibility in the business strategy (Zhang *et al.,* 2003, Choy *et al.,* 2008).

Flexibility produces a different way of thinking in order to serve each distinct customer's needs and for meeting time-based constraints (Duclos *et al.,* 2003). Besides being a powerful tool in a system that enhances value offerings appreciated by customers, flexibility ensures stable performance under changing conditions (Ling-yee and Ogunmokun, 2008). Increased flexibility in supply chain systems can be regarded as a strategy for improving the responsiveness of SMEs particularly in the decision making process (Sanchez and Perez, 2005). Thus flexibility enables SMEs to make alternative decisions. This leads to the following hypotheses:

Ho_2: There is no relationship between flexibility within an SME and the adoption of SCM practices
Ha_2: The greater the flexibility within an SME supply chain strategy, the easier it is to adopt SCM practices

Product Variety

The ever-increasing competitive environment today requires low-cost, high-quality products, and increasing varieties of goods and services that differentiates these products and services from alternative substitutes. (Duclos *et al.,* 2003). According to Mostert, Oosthuizen and Smith (2007), product substitutes are those products or services that consumers can turn to because they satisfy the same need. When customers find little or no difference between an organisation's product and those of a competing supplier, then the product is highly substitutable. In other words, the customer is readily willing to take a second-choice brand when the first product is not immediately available (Ballou, 2004).

SMEs strategically determine competitors' substitute products to differentiate their products in order to gain competitive advantages and to reach their set goals (Molz, 1998). Additionally, SMEs use SCM skills to convince customers that their products are different from those of the competitors through distribution capabilities that provide product availability at a high level so that customers will not have to consider a substitute product (Muradzikwa, Smith and De Villiers, 2004). Higher substitutability usually means a greater chance for a customer to select a competing product, possibly resulting in lost sales for SMEs (Venter, 2006). Nevertheless, with the use of SCM strategies, lost sales can be eliminated through transportation choices and storage choices (Ballou, 2004). Based on these assertions, the following hypotheses are proposed;

Ho_3: There is no relationship between product variety and the adoption of SCM practices in SMEs

Ha_3 The greater the variety of products offered by an SME, the greater the need to adopt SCM practices

Customer Satisfaction

Customer satisfaction is the art of making the customer happy by listening to them and responding to their needs (Zhang *et al.,* 2003). Customer satisfaction involves managing the business with the prime intention of satisfying customer needs rather than the needs of management (Herrmann, Huber and Braunstein, 2000). It is delivering to customers more than they request and consistently exceeding their expectations (Matzler and Hinterhuber, 1998). Customer satisfaction achieves for SMEs an increased level of customer loyalty, an increase in cash flow and a decrease in operating costs (Gosling, Shang and Marlow, 2005). As a result, customers will be willing to pay more for high quality products and services (Venter, 2006). Effective strategic supply chain decisions have a profound impact on competitive position, profitability, market share, as well as impact on the specific needs of the consumer (Song, Dong and Xu, 2014). Examples of these needs are consumer trends, type of products, services, quantities, qualities and time (Hugo, Babenhorst-weiss and Van Rooyen, 2002). As observed by Saura *et al.* (2008), SCM is the connection between production and consumption, a cost-reduction technique and a product differentiation strategy that brings greater customer satisfaction. Furthermore, SMEs tend to view themselves as entities that must improve on their supply chain service quality in order to compete effectively, enhance customer satisfaction and improve overall business performance (Millen, Sohal and Moss, 1999). This leads to the following hypotheses:

Ho_4: There is no relationship between the adoption of SCM practices and customer satisfaction in SMEs

Ha_4: Adoption of SCM practices leads to higher the customer satisfaction amongst SMEs

3. Conceptual Framework

The conceptual framework shown in Figure 1 was developed based on the literature review. The conceptual framework illustrates the proposed linkage between product quality, flexibility and product variety, which are taken to be the antecedents of SCM practices. In turn, the adoption of SCM practices is taken to be a driver of customer satisfaction.

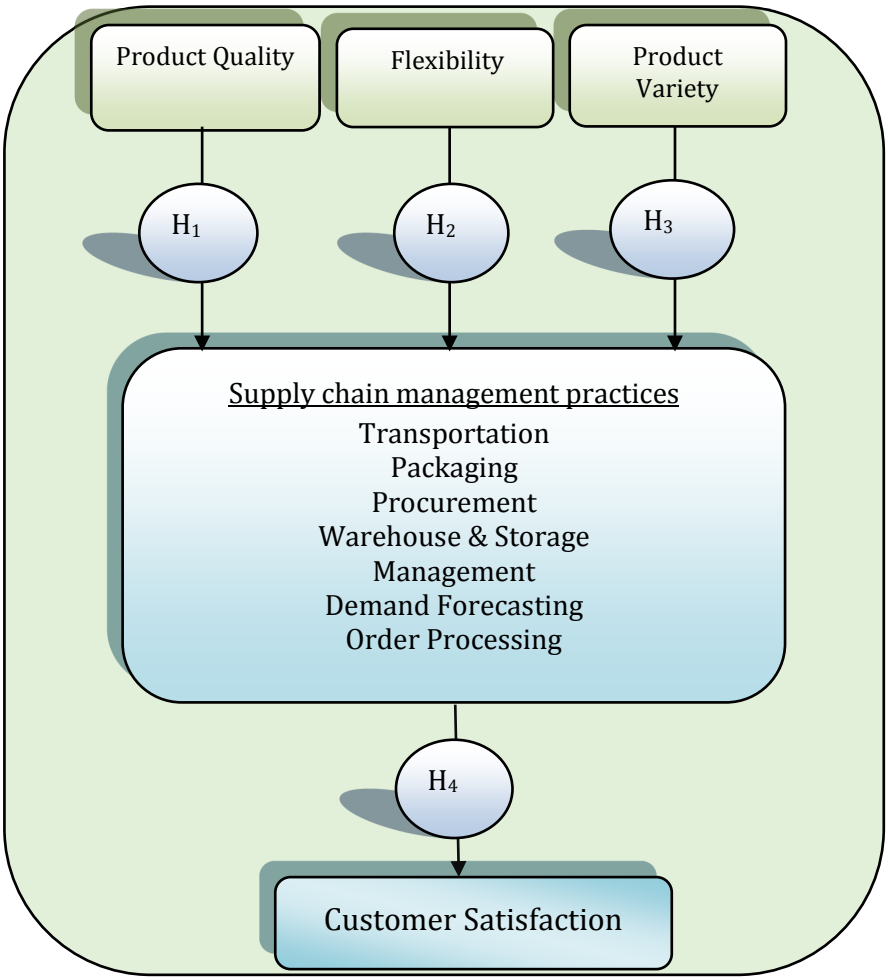

Figure 1. Conceptual Framework: Product Attributes, Supply Chain Management Practices and Customer Satisfaction

4. Research Methodology

Research Design

A quantitative approach using the cross-sectional descriptive survey technique was used (Creswell, 2013). The quantitative nature of the study was grounded on the need to quantify the data collected and to generalise the findings (Fouche, 2005). The quantitative approach was selected for the current study because quantitative research enhances the objectivity of the study since it is cheap, flexible and less time-consuming to conduct.

Sampling Design

The target population for the current study consisted of owners or managers of SMEs located in a selected local municipality which is based in Gauteng Province, South Africa. Respondents were selected using the probability random sampling technique. Using the historical approach, the sample size was set at n=200, consistently with previous studies (Ahola et al., 2008; Dolgui and Prodhon, 2007; Mula *et al.,* 2006; Wong, Lai and Ngai, 2009) in which almost the same ranges of sample size were used to examine the benefits of logistics strategies in SMES.

An analysis of the demographic characteristics of the respondents showed that approximately 61% (n=80) of the respondents were male and 39 % (n= 51) were female. In addition, a majority of the business owners/ managers (64%; n= 84) were aged above 30 years and the remaining 36% (n= 47) were aged below 30 years. In terms of academic qualifications, 43% (n=56) of respondents were in possession of either a higher education diploma or a certificate; 14% (n=18) were in possession of at least a university degree and 35% (n=46) had completed matric. The later characteristic was favourable to the current study because it indicated that the literacy levels of respondents were sufficiently high, which was a reflection of their ability to understand the questions in the data collection instrument.

Research Instrument

Data were collected using a four section questionnaire. Section A of the questionnaire elicited information on the demographic characteristics of the respondents as well as the profile of the SMEs. Section B elicited data on SCM practices implemented by the SMEs. Questions used in Section B were adapted from previous studies (Horvath, Autry and Wilcox, 2005; Voortman, 2004). Questions in Section C (adapted from Hong, 2007; Watson, Goodhue and Wixom, 2001) focused on product quality, flexibility and product variety. Section D elicited questions (adapted from Caridi and Cavalieri, 2004; Ramond and Croom, 2008) on customer satisfaction from the perspectives of owners and managers of SMEs. The adaptation involved essential adjustments to the language used, grammar, the level of difficulty in each question and the reduction in the number of items used. Moreover, only those questions that were relevant to the constructs examined in this study were used. Questions on Sections B, C and D were configured in a six point Likert style format anchored by '1' = not important and '6' = the very important.

In order to ascertain content validity, which is the representativeness of the content of the measurement instrument, the questionnaire was pre-tested with a conveniently selected sample of 15 SMEs. Feedback from the pre-test sample was used as the basis for effecting some changes to the questionnaire. After the pre-

test, the refined questionnaires were re-distributed to a different conveniently selected sample of 20 SMEs as a pilot study in order to check the reliability of the scale. The pilot study revealed that the scale had satisfactory reliability levels which ranged from 0.716 to 0.864 and that there were no further ambiguities in the questions.

In the collection of data, a number of ethical considerations *inter alia;* the right of respondents to confidentiality, anonymity, privacy, protection as well as informed consent were observed. Eventually, out of the 200 questionnaires that were initially administered to SMEs, 147 were returned, giving a return rate of 74%. However, 16 questionnaires were eliminated in the screening process, culminating in 131 questionnaires, which were used in the actual data analysis.

Data Analysis

In the present study, data analyses were conducted using the Statistical Package of the Social Sciences (SPSS version 22.0). Descriptive statistics were used to analyse the demographic characteristics of the sample and the hypothesised framework was tested using regression analysis.

5. Research Results

Reliability and Validity of the Measurement Scale

Reliability was measured using Cronbach Alpha Coefficient. The Cronbach alpha values for the subscales ranged between 0.716 and 0.864, whilst the Cronbach alpha value for the entire scale was 0.829. These results validate the proficiency of the measurement scale in capturing the constructs investigated in this study. The internal consistencies (reliability) of these measurement scales are reported in Table 1.

Table 1. Reliability values for the sub scales

Factor	N	No of Items	Cronbach Alpha
Product quality	131	5	0.716
Flexibility	131	4	0.803
Product variety	131	6	0.725
SCM practices	131	7	0.864
Customer satisfaction	131	6	0.773
Overall Cronbach Alpha for the entire Scale = 0.829			

Content and face validity of the instrument were ascertained through pre-testing the questionnaire with a conveniently selected sample of 30 SMEs. Moreover, a panel consisting of three academics who are experts in the fields of entrepreneurship and supply chain management reviewed the questionnaire to

ascertain its validity. Based on the feedback from the pre-test and academic reviews, several minor revisions were made to the questionnaire with a view to enrich its validity in addressing the aim of the study. Predictive validity was measured through regression analysis. Causality was explained by four of the three of the four factors in their relationship with customer satisfaction.

Regression Analysis: Product Quality, Flexibility, Product Variety and Supply Chain Management Practices

In this study, regression analysis using the enter method was utilised to test the proposed hypotheses. According to Malhotra (2010), regression analysis is an inferential statistical procedure for identifying the variables that either predict or provide the best clarification for the part of the total variance within the scores of the dependent constructs. One of the main assumptions made to support the use of regression analysis in this study is the presence of linearity between the independent and dependent constructs. In the two regression models resulting from the analyses, the values of the Variance Inflation Factor (VIF) fell within the maximum allowable threshold of 10 prescribed by Field (2009). Also, tolerance values were satisfactory because they were above the minimum of 0.5 recommended by Denis (2011). This implies that multicollinearity diagnosis did not indicate any severe threat, which rendered a regression analysis both practicable and suitable. With this assumption satisfied, product quality, flexibility and product variety were entered into the regression model as independent variables (constructs) while SCM practices was entered into the regression model as the dependent variable. These results are reported in Table 2.

Table 2. Regression Model 1- product quality, flexibility, product variety and supply chain management practices

Independent variables: Product quality, flexibility & Product variety	**Dependent variable: SCM practices**				
	Standardised Coefficients	**T**	**Sig.**	**Collinearity Statistics**	
	Beta			**Tol**	**VIF**
Product quality	0.372	4.240	0.000	0.567	1.874
Flexibility	0.265	5.825	0.001	0.624	1.883
Product variety	-0.101	1.959	0.504	0.543	2.423
Model summary: R= 0.479; Adjusted R^2 = 0.451; F = 12.763; Std. error of the estimate = 0.7335; Tol= Tolerance VIF= Variance Inflation factor					

Product quality, flexibility and product variety accounted for approximately 45% (R^2 = 0.451) of the variance explained in SCM practices. This implies that about 55% of the variance in SCM practices is explained by other extraneous factors which were not examined in this study.

Regression Analysis: Supply Chain Management Practices and Customer Satisfaction

A second linear regression procedure was applied to assess the possible existence of a predictive relationship between SCM practices (independent variable) and customer satisfaction (dependant variable). The results are reported in Table 3.

Table 3. Regression Model 2- Supply chain management practices and customer satisfaction

Independent variable: SCM practices	**Dependent variable: Customer Satisfaction**				
	Standardised Coefficients	**T**	**Sig**	**Collinearity Statistics**	
	Beta			**Tol**	**VIF**
SCM practices	0.365	6.132	0.001	0.724	1.679
Model summary: R= 0.517 Adjusted R^2 = 0.391 F=41.526 Tol=Tolerance VIF= Variance Inflation factor					

Regression Model 2 showed an R^2 value of 0.391, which depicts that approximately 39% of the variation of the customer satisfaction among SMEs can be explained by SCM practices. As such, approximately 61% of the variation in customer satisfaction is explained by other extraneous factors which remain unaccounted for in the present study.

6. Discussion

Alternative hypothesis Ha_1 was supported and was therefore accepted because the product quality factor emerged as statistically significant (β = 0.372; t = 4.240; p < 0.000) in the regression in the regression analysis. This result demonstrates that product quality is a predictor of the ease of adoption of SCM practices by SMEs. As mentioned by Ellegaard (2006) SMEs must position themselves strategically to be more competitive, to meet domestic, international and globalisation challenges and to offer good product/service design and performance (quality) (Genchev, 2009). This may be achieved by using SCM practices that play a key role in aligning business strategy such as delivery, ordering, productivity, responsiveness to customer needs (Langford, 2007). SMEs originate from individuals, who identify new opportunities in society and who are motivated to exploit such opportunities (March and Hevner, 2007). In other words, even if a product is produced in the right time, and is available at the right price, it will be useless if it is not of a satisfactory quality that meets the needs of the customer (Waller, 2003). SMEs, be they strategic, less strategic or somewhat strategic regard the quality of their products and services as necessary ingredients improve the overall business performance, and to increase sales (Park, 2006). Some studies (Saura *et al.,* 2008; Wixom and Watson, 2001) point out that considering how to improve SCM practices without considering the impact of

product and service quality would be to omit from the theoretical framework one of the most important tools for controlling consistency, improving efficiency, and improving supply chain operations. Therefore, for an SME to compete effectively and to gain sustainable advantages over its competitors it is necessary to improve the quality of its products and services (Sohal, Netto, Fitzpatrick and Noori, 2001).

Alternative Hypotheses Ha_2 found support and was accepted in the present study because the regression model showed that the flexibility factor was statistically significant ($\beta = 0.265$; $t = 5.825$; $p < 0.001$). This result denotes that the ease of adoption of SCM practices within an SME is predicted by the degree of flexibility within that SMEs supply chain strategy. According to Autry (2005) the strategic approach to SCM is built on a strong and flexible foundation. In addition, Chen (1999) suggests that flexibility in supply chains may well represent potential sources of improved efficiency. The findings of a study by Zhang *et al.* (2003) further show that flexibility enables SMEs to introduce new products quickly, support rapid product customisation, and shorten manufacturing lead times. As suggested by Lai, Ngai and Cheng (2002), elements such as on-time delivery of products and innovation capabilities among larger organisations, greater reliance on supply-chain relationships, shifting channel power and the globalisation of competition found in recent competitive environment, all point to greater opportunities to use flexibility to enhance competitiveness. After all, supply chain flexibility focuses on filling customer orders, rather than on improving efficiency and effectiveness of equipment to increase responsiveness and create a level of performance that enables firms to build competitive advantage over competitive rivals through customer satisfaction and loyalty (Molz, 1998), Moreover, SMEs have realised that to provide a quick response to changing customer needs, to cope successfully with uncertainty, to minimise inventory cost and to achieve high levels of customer satisfaction is to display the flexibility necessary for success (Skintzi, Ioannou and Prastacos, 2008). It can be suggested then that SMEs must set their goals based on proper prior attention to both the organisational flexibility and technical flexibility contexts, which are critical ingredients for success in supply chains.

In the current study, **Alternative Hypothesis Ha_3** did not find support and was therefore rejected because the results of the regression analysis showed that product quality was statistically insignificant ($\beta = -0.101$; $t = 1.959$; $p < 0.504$). This result signifies that product variety does not necessarily predict the ease of adoption of SCM strategies within SMEs. These results are consistent with the findings by Van der vorst, Beulens and Van beek (2005), Sanchez and Perez (2005), who found no association between product and service variety and adoption of SCM practices. However, the results of the current study contradict the findings of studies conducted by Gong (2008) and Gosling, Purvis and Naim (2009) which concluded that it is easier to adopt SCM practices when there is greater product variety within a supply chain. The results of the current study could be attributed to the fact that SMEs are smaller entities which may struggle to maintain and sustain more complex systems and operations, such as when their product mix is highly variable. As revealed by Sui *et al.* (2006), some smaller companies have either become bankrupt or liquidated because they diversified prematurely into areas that they are unprepared to service satisfactorily. Other smaller organisations

were unsuccessful because they introduced products without conducting adequate market research (Bowersox, Closs and Cooper, 2002). This is because smaller companies may not have the capacity in terms of resources such as expertise, finances experience and technology necessary to sustain their adopted operational models, which may be more complex than they realized (Ellegaard, 2008). In view of this, some scholars (Coyle, Bardi and Langley, 2003; Tassabehji and Moorhouse, 2008) suggest that a focus strategy could be a better option for small start-up operations because they compel the company to concentrate on a specific product or market niche, which is less susceptible to unpredictable market, price and cost swings. It is logical then to suggest then that unless such factors are taken into consideration, product variety may not necessarily stimulate easier adoption of in SCM practices within SMEs.

Alternative Hypothesis H_4 was supported in this study because the regression model showed a statistically significant relationship ($\beta = 0.365$; $t = 6.132$; $p < 0.001$) between SCM practices and customer service. This result depicts that the degree of customer satisfaction within an SME can be indexed on the extent to which SCM practices have been embraced and implemented by the concerned SME. It is also logical for one use the adoption of SCM practices to forecast the future levels of customer satisfaction in an SME. These findings are grounded in the results of a previous study by Paulraj, Chen and Flynn (2006) which found that supply chain strategies such as outsourcing, strategic alliance, implementation of information technology and Just in Time (JIT) may lead to the enhanced quality of products and services as well as increased flexibility and responsiveness to the requirements of customers/clients. Genchev (2009) also found that the adoption of supply chain strategies may result in lower inventory levels, reduced risk, decreases in total costs, superior firm financial performance and better competitive advantages. Taylor (2008) adds that improved order management, streamlined operational efficiency, decreasing inventory levels and the increased ability to reduce delivery lead times are principal prerequisites to gaining competitive advantages in SMEs. Still, skills upgrading through the training of workers, acquisition of supply sources, increasing operational capacity, creating strategic alliances and the use of outsourcing strategies are critical in generating high customer satisfaction (Ballou, 2004). Duclos *et al.* (2003) further opine that customer satisfaction is the key focus of any supply chain strategy and is influenced by a constellation of practices that include outbound transportation, packaging, procurement, demand forecasting, order processing, warehousing and reverse logistics, among others. Therefore, it is paramount that all SCM practices be expedited and optimised in order for SMEs to improve the levels of satisfaction amongst their customers.

7. Limitations and Implications for Further Research

The study is limited in that it focused on the adoption of SCM practices in Gauteng province only, and does not fully represent all the SMEs in South Africa. Consequently the results of the study cannot be generalised to all SMEs. Additionally, the shortcomings associated with quantitative methodologies used in the current study are acknowledged.

The study has several implications for further research. Any investigation into interventions should be aimed at empowering SMEs to implement SCM practices that include the obtaining of supply sources which generates collaborative relationships with particular suppliers so as to achieve long-term commitment and goals. Supplier relationships can also enrich strategic alliances based on reciprocal trust and enable SMEs to increase automation and improve supply chain information technology. Educational interventions on supply chain strategies could be tested through a longitudinal study to explore improvements amongst SMEs that are implementing SCM practices. The scope of further research should be broadened to include SMEs in the entire South African context, in order to provide a better picture of the extent of implementation, challenges as well as benefits of utilising SCM practices in SMEs in the country. Both qualitative and quantitative methods of data collection are recommended for any further research on logistics in SMEs.

8. Conclusion and Recommendations

The purpose of this study was to investigate the relationship between customer satisfaction, SCM practices and quality, variety and flexibility amongst SMEs in South Africa. Two input factors; namely, product quality and flexibility emerged as significant predictors of the ease of adoption of SCM practices in SMEs. However, product variety had no significant relationship with the adoption of SCM practices. In addition, SCM practices significantly predicted customer satisfaction. It can be concluded then that there is a positive and significant relationship between customer satisfaction and two factors; specifically, product quality and flexibility, but the relationship is mediated by the embracing and implementation of SCM practices within SMEs.

Several recommendations can be put forward, based on the conclusions drawn from the study. First, it has to be acknowledged that the relationship between customer satisfaction, SCM practices and the three input factors as examined in this study is of fundamental importance to SMEs. In light of this, it is critical that SMEs be educated regarding the importance of these factors. Second, SMEs should consider forming strategic alliances and outsource suppliers to form part of the production process in order to realise and improve on the organisation's core competences such as product quality as well as flexibility. Finally, it can be recommended that a strategic training programme aimed at assisting SMEs in correlating the supply chain objectives with the business strategies outlined in the study should be implemented. This should also assist in mitigating any forthcoming supply chain challenges. For example, if challenges such as lack of skills among SMEs, high cost of information technology and financial constraints are addressed, SMEs will have greater agility in handling other surprising challenges such as greater demands from order givers, competition in domestic markets, increased global competition, and organisational transformation, higher customer expectations of services and products and increased environmental concerns. SMEs may continue to experience challenges in implementing SCM practices if they are not managed by properly qualified individuals.

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DETERMINANTS OF PROFITABILITY: EVIDENCE FROM POWER AND ENERGY SECTOR

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Abstract: The study examines the impact of key determinants of profitability of power and energy sector in Pakistan such as firm size, firm age, firm growth, productivity, financial leverage and electricity crisis discussed in the broader inter-disciplinary literature. For this purpose panel data of 16 firms of power and energy sector is taken for 2001 to 2012. The study considers profitability determinants at the firm as well as industry affiliation levels in examining hypotheses developed from resource-based approaches. Random effect model is used to detect the combination of variables that best estimated the impact of the explanatory variables on the dependent variable. The empirical results suggest that firm size, firm growth, and electricity crisis positively impact the profitability. However, firm age, financial leverage and productivity negatively influence the firm profitability. This study also propose that during the electricity crisis the profitability of power sector is increased even production of this sector is very low. The findings further indicate that larger and younger firms with high growth and low productivity are more likely to be profitable. This study has found that firm productivity and firm size are the strongest determinants of profitability in power and energy sector of Pakistan.

JEL classification: F65, G23

Keywords: Profitability, Firm size, Firm growth, Leverage, Firm age, Productivity, Electricity crisis

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1. Introduction

Profit is one of the core objectives of any firm for its long term reputation and survival. Profitability is the profit making ability which is considerable an important factor for perpetual existence of firms. Measuring firm's profitability or taking into effect how well a business is being run is a very difficult task. There are various approaches have been developed. It can be measuring the process of gain sharing financially or in economic terms, depending on the prevailing situation and the current scenario. As we know that there is a strong bonding between the profitability and the growth. Profitability is also cause of maximizes the values of stakeholders as well as investors and also show the performance of any firm in competent environment.

Profitability is usually seen as significant prerequisite for firm survival and long term achievement; In addition, the variable significantly affects the performance of the other financial goals of the company. Some other factors that describe the position of the profitability of the company are its effect on economic development, technological change, employment and innovation. But as a result of increased competition, price forces and improved efficiency, companies are facing more difficulties to the required profitability. If the question what factors determine the profitability elements are one of a high priority for researchers and practitioners, including debt holders, managers, debt holders, policy makers and investors (Yazdanfar, 2013).

The interest to study the determinants of profitability has grown over time in a wide range of scientific disciplines. Internal resources of a company are believed to have significant impact on profitability by strategic management, finance and accountancy scholars (Barney, 2001). Slater & Olson, (2001) recognize the competition within the market in which the company operates in as the determining factor of profitability in Industrial economics.

The issue of firm profitability has been central in strategy research for decades and encompasses most other questions that have been raised in the field, as for instance, why firms differ, how they behave, how they choose strategies and how they are managed (Porter, 1991).

1.2 Problem statement of the study

Taking into account the fact that Pakistan economy is going down due to the severe problem of the energy shortage since last six to seven years. There are lot of studies have been conducted on bank profitability but now there is need to check the profitability (Performance) of non-financial firms like Power and Energy Sector of Pakistan with the same internal variables which have been highlighted in the literature available both for developed and developing economy.

In short, there is no generally accepted outcome to the determinants of profitability of any firm or industry level because countries are different in nature to each other by their financial system, political systems, operating environments and economic systems. Hence in this study, we studied some firm specific determinants of profitability of power and energy sector of Pakistan and different variables (firm age, firm size, firm growth, lagged profitability and financial leverage etc.) that are possibly accountable for defining profitability of power sector, have been nominated based on the theoretical literatures and past empirical studies. Even though, lot of previous studies have done to add their own novelty to the profitability theory and specified their particular policy implications in developed economy, and developing countries including Pakistan received slight attention in numerous literature on this concern.

The objectives of the study are:

1. To determine the profitability (performance) of power and energy sector in Pakistan.
2. To investigate the firm different determinants of profitability
3. To investigate the relationship between profitability and productivity of Power and Energy sector of Pakistan.
4. To investigate the relationship between profitability and electricity crises of Power and Energy sector in Pakistan.

1.3 Significance of the study

The power and energy sector is one of the most important industry sectors of Pakistan because all other industry sectors like textile, cement, sugar and agriculture are also based on this sector. The economy of Pakistan is much dependent on this sector but now a day's country is facing a huge shortfall of electricity which badly affected the economy of Pakistan. This study determined the profitability of power and energy sector of Pakistan.

The findings have policy implications both for the firms as well as for economic managers of developing countries like Pakistan. The proprietors, directors, and managers of the firms which are working in developing countries especially like Pakistan reflect both the liquidity level and capital structure to attain higher profitability.

This is perhaps first study of its kind of nature that attempts to elucidate variation in profitability determinants of power and energy sector in Pakistani context using a Resource base view. The outcomes of this research also have significant implications for government in formulating suitable policies for the power and energy sector of Pakistan, as the government has dual responsibility of being the manager of the country and main solitary client of the industry.

The study is helpful to the private local and international investors to invest in the Power and energy sector that may cause increase in production and finally will boost the economy of Pakistan. Additionally, other concerned researchers may take this contribution of the study as a base for comprehensive and further studies.

2. Literature Review

2.1 Theoretical background of the study

According the concept of theory, the variables that could clarify profitability of firm can be divided into three categories: market related variables, industry variables and firm specific characteristics. Many efforts have been made to examine the impact of these variables on profitability and also check that how these variables can explain the profitability. There are numerous broad theoretical aspects on profitability: market based view (MBV), organization-environment structure performance (OESP), structure conduct performance" (SCP), strategy-structure-performance (SSP) and Resource based view (RBV) perspective. While SCP and MBV are traditional approaches which explain the

industry characteristics in term of describing firm profitability and RBV explain the firm level determinants of profitability (Wernerfelt, 1984; Barney , 1991; Mahoney & Pandian, 1992; Amit & Schoemaker, 1993; Peteraf, 1993).

For data availability reasons, the current research is based on the RBV and emphases on a few variables categorized as firm specific determinants of. Unlike the other approaches, this approach suggests that firm profitability is mainly determined by internal factors rather than external variables (Barney J., 1991). In other words, the RBV describes firm profitability in various terms, for example, explaining profitability mainly with reference to specific firm-level characteristics, capabilities and resources (Jovanovic, 1982; Wernerfelt, 1984).

2.2 Empirical review of the study

Qian (2002) analyzed that research on curvilinear relationship between variables has been done by while defining the possibility of linking multi-nationality with product diversification and profitability. The three average data (1991-1994) of SME's were taken having on average 260 employees. The results indicated that watching out for the optimal level is the most suitable strategy because profitability is positively by these variables up to a certain extent and after that it starts declining.

Eriksen & Knudren (2003) concluded that the firm level determinants co-determine the level of profitability. Industry affects can affect the profitability of the firms significantly but they are not enough. So, the Danish SME's were taken as a base and the sample size taken were of 9809 firms having the range of 10-499 employees. ROA was used as an ultimate proxy measure for the financial performance.

Spanos, Zaralis & Lioukas (2004) chose Greece as a center of his research on the country's profitability. The specific attention was given to the strategy (pure and hybrid) effects on profitability. Typical variables like market concentration, growth and restraints to entry were selected as the industry variables. The findings support the point that provided as long as the cost of strategy is low and hybrid the profitability level will sustain or increase. Though industry variables not directly but indirectly do contribute to the gain sharing process specially the entry barriers. And ultimately the firm variables can explain the variability in the gain sharing process almost as twice as the industry variables.

Liu & Hung (2006) proposed a unique study about finding of a connection between the services and the profitability of bank industry in Taiwan. The major hypothesis selected was with the increase of the number of branches of banks the profitability increases by taking into account the overhead expenses along with the average salaries taken as a proxy for services. Regression analysis was chosen as a best estimator to calculate the accurate extent. They can up with the final conclusion that a positive relation is found to exist between the long term profitability and the services. Probably that's why the mergers are getting so common now a days. It also seeks to explain that due to the enhanced burden of overheads the firms are encouraging the people for early retirement and thus replacing them with fresh low wage employees.

Hawari & Ward (2006) showed that though customer satisfaction is a mediating variable a positive relation is said to exist between the profitability and the auto mated service quality. Only a few researchers have attempted to work on the

service quality and the profitability. So Australian Banks became the base to conduct a comprehensive study done by the researcher in 2005 for the same. The major hypothesis selected was there is a positive relationship between the service quality of the banking sector and the financial performance while the customer satisfaction proposed to be an intervening variable. Automated service quality is decomposed to ATM, Tele banking, internet banking. Customer satisfaction can include service products, staff, and automated services while the financial performance can include assets utilization, ROE, ROA etc.

The Banks of Korea were taken as a sample from the period 1992-2002 and major determinants of profitability were estimated by taking into account the market structure hypothesis and efficient market hypothesis. The final results clearly indicate that profitability has a major determinant named as the Efficiency and ultimately it is going to support the efficient structure hypothesis which states that due to the high efficiency the banks obtain greater profitability resulting ultimately to a concentration in the market (Park & Weber, 2006).

García-Herrero, Gavilá & Santabárbara (2009) found out the possible causes of the low profitability in the Chinese banks major determinants chosen were capitalization tendency, share of deposits and X-efficiency. The period of study was taken from 1997-2004. Moreover the study revealed that the socialism is detrimental to profitability. Regression analysis also highlighted that market concentration is inversely related to the China's profitability in the banking Sector.

Love, Roper & Du (2009) started to find out the effect of innovation and externally owned manufacturing industries on the profitability. The study was conducted on the manufacturing industry of plants in Ireland taking into effect the indigenous and externally owned plant manufacturing firms. Other studies conducted in this regard propelled the writer to hypothesize a positive relationship between non-indigenous and R&D with profitability. The source of information taken is IIP (Irish Innovation Panel). Questionnaires, sampling technique and postal survey methodologies have applied on the firms having 10 or more employees over 3 years average period from 1994-2002. The conclusion was drawn that there is no direct link with innovation and profitability and externally owned manufacturing firms with profitability.

Sufian & Parman (2009) undertook a study on a developing country Malaysia highlighting the determinants of profitability on the non-banking financial sector. The least square method was chosen as the scale to measure the possible effects on profitability by the major determinants as operational expenses, capitalization level, loan intensity and credit tendency. The conclusion was summarized as the high expenses of operations as well as capitalization tend to boost the level of profitability upwards. But the other two variables as the loan and credit tendency have and inverse with the profitability according to this study.

Asimakopoulos, Samitas & Papadogonas (2009) believed that it's better to exploit the variables determining the profitability of a developing country like that of Greece. He took the panel data of 1995-2003 of non-financial firms listed in Greece Stock Exchange and tested their profitability under consideration of the variables like size, sales growth and investment on one side and leverage and current assets on the other hand. A positive relation was found with the first set of variables and ultimately a negative relationship was drawn with the second set. And finally he also reflected the importance of intervention of EMU in a developing country.

Stierwald (2010) conducted the research which shows the determinants of profitability of 961 large Australian firms using panel data for the period of 1995-2005. The result of descriptive statistics revealed that large profit is heterogeneity in

nature between industries and across firms. Estimation results specify that corporate profitability is primarily determined by the characteristics at the firm level and the industry effects are important, but in a much lesser degree. The analysis also tells that among the effects on business productivity and persistence of productivity improve profitability.

Tan & Floros (2012) conducted research to check the determinants of profitability in Chinese 101 banks. They used bank specific variables to check the impact of inflation on bank profitability while controlling industry specific variables. Bank specific panel data were used for the period of 2003-2009 with 197 observations. The GMM (generalized methods of moments) estimators were applied. The results revealed that there is positive relationship exists between profitability, banking sector development, inflation, cost efficiency and stock market development in China. The authors also explain that low profitability is affected by high taxation and non-traditional activities. They also found competitive atmosphere in chinese banking sectors.

Yazdanfar (2013) conducted the research in Sweden which shows the firm specific determinants of profitability with a large sample size of 12530 micro firms dividing in four industries with 87000 observations for the period of 2006 to 2007. Resource base view approach was used to check the set of variables. Seemingly unrelated regression (SUR) was tested and results revealed that firm growth, firm size, lagged profitability and productivity related positively with profitability while industry affiliation and firm age have negatively influence with profitability.

Based on the resource based view, we found positive relationship between profitability and firm size. If the firms are larger than better chance to access more resources and the more likely to diversity its range of product by taking advantage of economies of scale causing in profitability increased. For example, (Gschwandtner, 2005; Ito & Fukao, 2008; Nunes, Serrasqueiro, & Sequeira, 2009; Stierwald A., 2010) find that there is positive and significant relationship between firm size and profitability while on the other side (Jensen & Murphy, 1990; Pi & Timme, 1993; Dhawan, 2001; Geroski, Machin, & Walters, 1997) find negative relationship between portability and firm size.

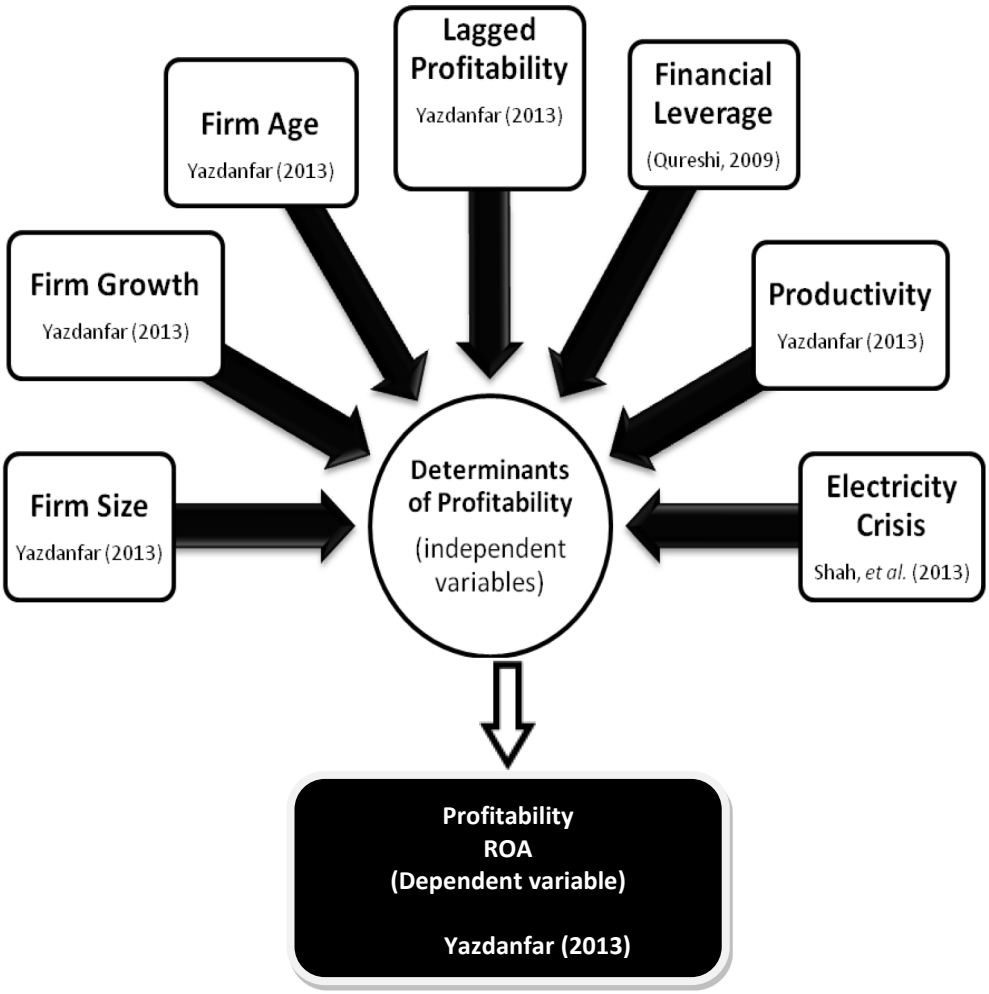
Based on the Resource based view, the more firm old the more it can easily attain resources (Autio, 2005). Because firm age is related with “more information”, “better reputation”, “greater experience”, “financial institutions” and “greater access to business networks”, which all these help to overcome on limiting access to resources and firm will operate more efficiently (Curran, Blackburn, & Black, 1993). The studies which determine the relationship between profitability and firm age have made mixed results. Some of these studies explain inverse relationship between profitability and firm age. On other hand such as Claver, Molina, & Tari, (2002) and Ito & Fukao, (2008) found positive and significant relationship between firm age and profitability. On the basis of literature review, in this study firm age is measured as the number of years since commencement of firm by using the proxy variable for age.

This part will address the basic statistical tools used for estimation, the sample size, and the sources from where data has been taken and also a brief description of the research model and variables used.

3. Model, Data & Research Methodology

3.1 Theoretical Framework

Figure 1. Graphical Representation of Model



3.2 Research Model Developed

Profitability can be measured by Return on Asset (ROA), Return on Equity (ROE), Net Interest Margin (NIM) and Return on Capital Employed (ROCE) variables, but for my research I have focused on Return on Assets (ROA). There are six independent variables Firm Size (FS), Firm Age (FA), Firm Growth (FG), and Lagged Profitability (LROA), Electricity Crisis (EC), Financial Leverage (FL) and Productivity (P).

The following models are constructed for the complete sample and for one industry.

$$ROA_{it} = \beta_O + \beta_1 FS_{it} + \beta_2 FA_{it} + \beta_3 FG_{it} + \beta_4 LROA_{it-1} + \beta_5 P_{it} + \mu$$
(Eq. 3.1)

$$ROA_{it} = \beta_O + \beta_1 FS_{it} + \beta_2 FA_{it} + \beta_3 FG_{it} + \beta_4 LROA_{it-1} + \beta_5 P_{it} + \beta_6 FL_{it} + \mu$$
(Eq. 3.2)

$$ROA_{it} = \beta_O + \beta_1 FS_{it} + \beta_2 FA_{it} + \beta_3 FG_{it} + \beta_4 LROA_{it-1} + \beta_5 P_{it} + \beta_6 FL_{it} + \beta_7 EC_{it} + \mu$$
(Eq. 3.3)

Where Profitability=Return on Asset (ROA) is measured as firm's book value of net profit after tax divided by total assets β_O=constant; firm Size i,t = size of firm i at time t; firm size (FS) is measured as the firm's book value of sales; Firm Age i,t=age of firm i at time t; "FA" is measure as the number of years since firm inception as of the year of data collection; Growth $_{i,t}$=firm growth is measured as current year's sales – last year's sales/last year's sales; Lagged profitability i,t=LROA is measured by taking profitability of previous year; Electricity crisis i,t=EC is measured by using dummy variable 0, 1 while 0 mean no and 1 mean yes; Financial Leverage=FL is measured as ratio of total debt to total assets; Productivity=P is measured by using proxy of total factor productivity (TFP) and μ=error term

I have included two more variables in baseline model, "financial leverage" borrowed from (Qureshi, 2009) and "electricity crisis" borrowed from (Shah, et al. 2013) because these two variables suitable for power sector of Pakistan due to current economic condition of the country. I used the above borrowed model for non-financial institutions for the Power and Energy sector of Pakistan.

3.3 Sample Size and Source

For the purpose of this study secondary data is used. All the data has been acquired from different publications of State Bank of Pakistan, Karachi Stock Exchange (KSE) and company's website. This study considers the panel data for the period of 2001-2012 for 16 firms of Power and Energy sector which are current listed in Karachi Stock Exchange (KSE). Some of them are private limited while others are public limited. Depending on the availability of company annual reports the observations was made. The assets, liabilities and related accounting data was collect from company annual reports and State Bank of Pakistan library, Web sites.

3.4 Chosen Variables

The choice to examine the determinants of profitability identified below from above review of literature and on the base of resource based view (RBV) approach. Return on assets (ROA) is used as proxy variable for the profitability dependent variable in this study. Return on assets is measured by firm book value after tax divided by total assets. Return on assets (ROA) is always been considered as one of the best measures to estimate the financial efficiency of the firm. This may be due to two possible causes,

first the managers and the external analysis considers this ratio as much more convenient and easy to reflect the true position of the company with respect to the assets. And secondly, it reflects the effect of corporate level strategy on the firm's performance as compared to the ROE which measures investors' expectations (Grant, Jammine, & Thomas, 1988). On the subject area eight variables have been selected to be examined and they include:

Table 1. Summaries of Explanatory Variables and Expected Relationship

Determinants	Definition/Proxies	Hypotheses	Source
Dependent Variable			
Profitability (ROA)	Firm's book value of net profit after tax divided by total assets	NA	Yazdanfar (2013),
Independent Variables			
Firm Size (FS)	Firm size is measured as the firm's book value of sales	+	Yazdanfar (2013)
Firm Age (FA)	The number of years since firm inception	+	Yazdanfar (2013)
Firm Growth (FG)	Current year's sales minus last year's sales divided by last year's sales	+	Yazdanfar (2013)
Lagged Profitability (LROA)	Previous year profitability	+	Yazdanfar (2013)
Financial Leverage (FL)	Total debt divided by total assets	-	(Qureshi, 2009)
Productivity (P)	Total factor productivity (TFP) Book value output divided by labour cost plus capital cost. Labour cost= Salaries and Wages Capital cost=Capital investment income and Interest	+	Yazdanfar (2013)
Electricity Crisis (EC)	Use dummy variable 0 and 1 2001-2006= 0 2007-2012= 1	-	Shah, et al. (2013)

3.5 Estimation Techniques

The determinants of profitability are tested with the help of statistical tools in EViews version 6.0. Descriptive statistics is used to check the central tendency and dispersion of the data, with the help of Correlation analysis the hypothesis is tested, Panel unit root is used to check the stationarity of the data. Hausman test used for model selection which suggests that random effect model is more appropriate for this study.

4. Empirical results

4.1 Descriptive Statistics Results

Table 2. Descriptive Statistics Results

Variables	Mean	Median	Maximum	Minimum	Std. Dev.
Return on asset	0.012889	0.004779	0.271238	-0.36499	0.091915
Firm size	15687.77	2067.177	174712.2	0.000000	29825.44
Firm growth	0.528477	0.077618	19.60843	-0.98208	2.359224
Firm age	17.09375	13.00000	100.0000	0.000000	20.80026
Lagged profitability	0.012404	0.004644	0.271238	-0.36499	0.091783
Electricity crisis	0.500000	0.500000	1.000000	0.000000	0.501307
Financial leverage	0.442338	0.454290	1.265267	0.000000	0.335905
Productivity	30224000	29449000	44153000	19036000	8613111.

The table 2 presents the descriptive statistics of the variables (i.e. Return on assets, firm size, firm growth, firm age, lagged profitability, electricity crisis, financial leverage and productivity based on raw data for the years 2008 to 2012. The table indicates the last twelve year overall financial performance of the companies.

The table also shows the summary of data defining the central tendency and dispersion of the data. The table exhibits the minimum and maximum value of each variable that actually tells about the date range of each variable. Mean and Std. Deviation of each variable also given below.

4.3 Panel Unit Root Results

Before going to modeling, it is necessary to check first whether the data is stationary or non-stationary. To analyze the efficiency of the variables in model, unit root test should be applied. If data is non-stationary at level then it is need to check at first difference or second difference because non stationary of data can produce spurious results that cause the insignificants of model. Due to unbalanced panel, in this study, the Augmented Dickey Fuller (ADF) is used to check the stationary or non-stationary of data (Baltagi, 2005) and other leterature of econometrics sugest that Augmented Dickey Fuller is suitable for unbalance panel data because it accommodates with any number of lags.

Table 3. Unit Root Results

H0: Series contains a unit root H1: Series is stationary			
Series	**ADF Value**	**Fisher (p-Value)**	**Decision**
Profitability	1.96021	0.0250**	Stationary at Level
Firm Size	7.56610	0.0000***	Stationary at Level
Firm Growth	1.43963	0.0750*	Stationary at Level
Firm Age	9.31745	0.0000***	Stationary at Level
Lagged Profitability	1.73406	0.0415**	Stationary at Level
Electricity Crisis	7.18736	0.0000***	Stationary at Level
Financial Leverage	6.86959	0.0000***	Stationary at Level
Productivity	8.23387	0.0000***	Stationary at Level

Note:*, **, *** indicate the significance at 10%, 5% and 1% level respectively

According to the results of ADF – Fisher Chi-square, all variables are significant at level so there is no need to take first or second difference. So, null hypothesis H_o is rejected. Hence, the series is stationary at level. Now we can further proceed to analyze the impacts with the help of random effect or fixed effect model in order to find determinants of profitability of power sector.

4.4 Model Selection

Random Effect model is used when the sample has different characteristics. Because companies are not same in characteristics such as Return on Assets, firm size, firm growth, number of shareholders and business in nature etc. Fixed Effects model is applied for firms to control all characteristics that are stable considered for research for time of fixed period. This model delivers results that statistically more better by eliminating biasness from data and describes within sample differences only (Gujarati, 1988). That's why random effect model is more appropriate to describe deviations between determinants of profitability.

First, when number of cross section N is greater than number of period T than random effect model is more appropriate. N > T (REM) (Gujarati, 1988)

When number of cross section N is less than number of period T than fixed effect model is more appropriate. N < T (FEM) (Gujarati, 1988)

The other way to check which model is more appropriate through Hausman test.

4.5 Hausman Test

Panel data is used in this study, so the data is analyzed whether through random effect or fixed effect. In this purpose, I use the Hausman test criteria to check which model is more appropriate in this study.

H_0: Random Effects model is consistent and efficient.
H_1: Random Effects model is inconsistent.

Table 4. Hausman Test Results

Correlated Random Effects - Hausman Test Pool: POOL01 Test cross-section random effects			
Test Summary	**Chi-Sq. Statistic**	**Chi-Sq. d.f.**	**Prob.**
Cross-section random	0.000000	7	1.0000
* Cross-section test variance is invalid. Hausman statistic set to zero. ** WARNING: estimated cross-section random effects variance is zero.			

Table 4 describes that the p value is not significant. So null hypothesis is accepted and alternative hypothesis is rejected. According to the Hausman test, random effect model is appropriate in this study.

4.6 Base Line Model

$$ROA_{it} = \beta_O + \beta_1 FS_{it} + \beta_2 FA_{it} + \beta_3 FG_{it} + \beta_4 LROA_{it-1} + \beta_5 P_{it} + \mu$$

Table 5. Base Line Model Results

Dependent Variable: ROA_?				
Method: Pooled EGLS (Cross-section random effects)				
Sample: 2001 2012				
Included observations: 12				
Cross-sections included: 16				
Total pool (balanced) observations: 192				
Swamy and Arora estimator of component variances				
Variables	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
C	0.058509	0.021425	2.730871	0.0069
Firm Size	0.656340	2.297607	2.871046	0.0046***
Firm Growth	0.003421	0.002384	1.434744	0.1530
Firm Age	-0.001281	0.000329	-3.890007	0.0001***
Lagged Profitability	0.301780	0.066290	4.552451	0.0000***
Productivity	-1.317309	6.908710	-1.896733	0.0594*
R Square = 0.24		**Mean dependent var =** 0.012889		
Adjusted R^2 = 0.22		**S.D. dependent var =** 0.091915		
F-statistic = 12.36		**Sum squared resid =** 1.211142		
Prob (F-statistic) = 0.000000		**Durbin-Watson** = 2.05		

Note:*, **, *** indicate the significance at 10%, 5% and 1% level respectively

Table 5 shows the result of random effect model. Firm size having the p value .00 which is significant at .00<.01 levels and β value .65 which indicate that firm size have 65% impact on profitability and results are very similar to the results of (Gschwandtner, 2005; Ito & Fukao, 2008; Nunes, Serrasqueiro, & Sequeira, 2009; Stierwald A., 2010). On other hand, results have contradiction with the results of (Jensen & Murphy, 1990; Pi & Timme, 1993; Dhawan, 2001; Geroski, Machin, & Walters, 1997). Firm size is the most significant variable in model. So if the firms in power and energy sector increase the volume of their sales and number of employees then profitability will increase.

The p value of firm growth is .15 which is not significant at any level and β value .003 which describe that firm growth is positive but not significant relationship with profitability and have very minor impact on profitability of power and energy sector. The result is matched with the results of (Weisbord, 1994; Markman & Gartner, 2002; Coad, 2007).

Firm age having p value .00 which is highly significant at .01 levels with β coefficient -.001. It indicates that firm growth is highly significant but negatively related with profitability of power and energy sector. The firm age have no impact on profitability. The result of this variable do not goes to the favor of (Claver, Molina, & Tari, 2002) and (Ito & Fukao, 2008).

The p value of lagged profitability is .00 which is higly significant at .01 levels. The β coefficient is .30 which indicates that lagged profitability is significant and positively related with profitability of power and energy sector. The results are similar to the results of (Bothwel, Cooley, & Hall, 1984) and (Fenny & Rogers, 1999).

The p value of productivity is .07 which is significant at .1 levels. The β -0.91 indicates that the productivity have 91% impact on profitability. So productivity is negative and significantly related with profitability of power and energy sector.

The adjusted R^2 shows the goodness of fit of model. Adjusted R^2 is .22 which means that there is 22% variation in dependent variable with due to predictors (independent variables). So, this model is weak but in panel data adjusted R^2 is mostly low as compared to series and cross-sectional data (Victoria, 2013). The value of Durbin Watson is 2.05 which mean there is no auto correlation in sample.

4.7 Model with Financial Leverage

$$ROA_{it} = \beta_O + \beta_1 FS_{it} + \beta_2 FA_{it} + \beta_3 FG_{it} + \beta_4 LROA_{it-1} + \beta_5 P_{it} + \beta_6 FL_{it} + \mu$$

Table 6. Model with Financial Leverage Results

Dependent Variable: Return on Assets (ROA)				
Method: Pooled EGLS (Cross-section random effects)				
Sample: 2001 2012				
Included observations: 12				
Cross-sections included: 16				
Total pool (balanced) observations: 192				
Swamy and Arora estimator of component variances				
Variables	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
C	0.060339	0.021579	2.796151	0.0057
Firm Size	6.478707	2.294307	2.820422	0.0053***
Firm Growth	0.003543	0.002395	1.479566	0.1407
Firm Age	-0.001207	0.000340	-3.546316	0.0005***
Lagged Profitability	0.299240	0.066525	4.498170	0.0000***
Financial Leverage	-3.785093	2.017991	-1.875674	0.0742*
Productivity	-1.173209	7.090810	-1.655502	0.0995*
R Square = 0.38		**Mean dependent var =** 0.012889		
Adjusted R^2 = 0.35		**S.D. dependent var =** 0.091915		
F-statistic = 10.40		**Sum squared resid =** 1.206407		
Prob (F-statistic) = 0.000000		**Durbin-Watson** = 2.04		

Note:*, **, *** indicate the significance at 10%, 5% and 1% level respectively

According to table 6, financial leverage is added to previous model to identify its impact on profitability of power and energy sector in Pakistan. Financial leverage having p value .07 which is significant at .1 level but β -.016 indicates minor impact on profitability. So the results show that financial leverage is significant but negatively related with profitability of power sector. This result is similar to the results of (Qureshi, 2009; Sheikh & Wang, 2011).

Adjusted R^2 increases to .35 from .22 and Durbin-Watson is 2.04 which mean that autocorrelation does not exist. So it expresses that by introduction variable of financial leverage this model is improved than base line model. Firm size, firm age and lagged profitability are significant at .01 levels while firm growth is positively but not significantly related with profitability. The firm productivity is also significant at .1 levels and positively related with profitability. The overall performance of model is increase but firm growth still not has significant relationship with profitability of power and energy sector.

4.8 Final Model

$$ROA_{it} = \beta_O + \beta_1 FS_{it} + \beta_2 FA_{it} + \beta_3 FG_{it} + \beta_4 LROA_{it-1} + \beta_5 P_{it} + \beta_6 LFL_{it} + \beta_7 EC_{it} + \mu$$

Table 7. Final Model Results

Dependent Variable: ROA_?				
Method: Pooled EGLS (Cross-section random effects)				
Date: 05/22/14 Time: 01:17				
Sample (adjusted): 2002 2012				
Included observations: 12				
Cross-sections included: 16				
Total pool (balanced) observations: 192				
Swamy and Arora estimator of component variances				
Variables	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
C	0.103426	0.038225	2.705669	0.0076
Firm Size	5.680407	2.329407	2.449095	0.0154**
Firm Growth	0.003996	0.002372	1.684659	0.0940*
Lagged Firm Age	-0.000921	0.000357	-2.581585	0.0107**
Lagged Profitability	0.340227	0.070072	4.855352	0.0000***
Electricity Crisis	0.044996	0.028819	1.561318	0.0905*
Financial Leverage	-0.017203	0.009657	-1.781537	0.0702*
Productivity	-3.593809	1.688209	-2.134271	0.0344**
R Square = 0.41		**Mean dependent var =** 0.011343		
Adjusted R^2 = 0.38		**S.D. dependent var =** 0.091430		
F-statistic = 8.665821		**Sum squared resid =** 0.988878		
Prob (F-statistic) = 0.000000		**Durbin-Watson** = 2.16		

Note:*, **, *** indicate the significance at 10%, 5% and 1% level respectively

At this step the inclusion of another variable electricity crisis in the model, coefficients and significance values are again changed. The p value of electricity crisis is .09 which is significant at .1 level and β coefficient is .04 which indicate that electricity crisis have 4% impact on profitability. The electricity crisis has positive and significant relationship with profitability of power and energy sector in Pakistan. So during the crisis period the profitability of power sector is increased while on other hand electricity crisis negatively related with profitability in Textile industry, cement industry (Shah, Essrani, Shah, & Rahat, 2013) and electricity crisis is positively related with profitability of food producers in Pakistan (Hussain & Javed, 2012).

Firm size, Lagged firm age, and productivity are significant at .05 levels while firm growth and financial leverage are significant at .1 levels. Adjusted R^2 increases to .38 from .35 and Durbin-Watson is 2.16 which means that autocorrelation does not exist. So it expresses that by introduction variable of electricity crisis this model is improved than previous model used in this study. This model shows the best possible combination of variables with improved adjusted R square .38.

5.1 Conclusion

This study has examined how firm specific characteristics had affected the profitability of power and energy sector in Pakistan over the period 2001-2012 that includes both pre and post electricity crisis. The present study also addresses an issue of profitability that is relevant to various stakeholders, including debt holders, investors and managers and may facilitate further research in similar areas of small business studies. The empirical results from investigating a large sample of 16 firms of power and energy sector of Pakistan suggest that firm size has positive and significant relationship with profitability (Gschwandtner, 2005; Nunes, Serrasqueiro, & Sequeira, 2009; Ito & Fukao, 2008; Stierwald A., 2010). Firms in power and energy sector with high volume of sales and greater number of employees increases the profitability of this sector. Firm growth has positive and significant relationship with profitability (Geroski, Machin, & Walters, 1997; Samiloglu & Demirgunes, 2008; Fitzsimmons, Steffens, & Douglas, 2005; Claver, Molina, & Tari, 2002; Asimakopoulos, Samitas, & Papadogonas, 2009). Firm productivity have negative and significant relationship with profitability which indicate that larger and younger firms of power sector with low productivity and high growth are more likely to be profitable. The findings further suggest that lagged firm age and lagged profitability both have significant relationship with current year profitability of power and energy sector. Firm size and productivity are found to be the strongest determinants of profitability.

Additionally, and providing evidence from variables that were not taken into consideration in previous studies namely the effects from financial leverage and electricity crisis, I found power and energy sector firms were not ready to be exposed to the competition that resulted from these two variables. This study found significant relationship of financial leverage and electricity crisis with profitability of power and energy sector of Pakistan. So during the period of electricity crisis the profitability of power sector is increased while on other hand electricity crisis negatively related with profitability in Textile industry and cement industry (Shah, Essrani, Shah, & Rahat, 2013) whereas electricity crisis is positively related with profitability of food producers in Pakistan (Hussain & Javed, 2012).

As our results suggest that Profitability in terms of ROA in Power sector is very important and it is affected by the above predictors which claim that Resource Based theory is partially accepted in power and energy sector of Pakistan. This study also tells that during the electricity crisis the profitability of power and energy sector has not declining trend even production of this sector is very less due to which Pakistan is suffering with high shortfall of electricity.

5.2 Practical Implications

The study highlights the (Profitability) performance of Power and Energy sector of Pakistan. The findings of this research will probably help the top management of power sector in making important decisions and in contingency planning for unexpected factors. Moreover, it will provide an insight into activities which require consideration for improving the profitability of the power and energy sector. The study will also attract the private local and international investors to invest in the Power and energy sector which will cause the increase in production of this sector and finally will boost the economy of Pakistan.

5.3 Limitations of the Study

We were unable to collect more deep and sufficient data to analyze the subsequent performance of power and energy sector in the light of state owned policies and regulations which have an outer impact on power and energy sector of Pakistan. Due to insufficient data it would not be possible for me to generate highly reliable results but I can try to explore the relationship and the effects of different variables with respect to profitability of the power and energy sector of Pakistan. This research is limited to firms of power and energy sector with Karachi stock exchange of Pakistan and identifies the real performance of the power and energy sector in terms of profitability. It does not include those firms of power and energy sector which do not generate electricity in Pakistan.

5.4 Future Research Directions

The current study should be according to both policymakers and researchers in the arena of economic development. Certainly, the findings of this study are Pakistan-specific, and further work is needed to found whether it may be comprehensive results for the global economy. Future research should also include external variables as Inflation, GDP and circular debt that affect the profitability in the Power and Energy Sector.

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Appendix 1 Summary of Sample Used In the Study

Power and Energy Sector	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Obs.
Altern Energy Ltd.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	12
Ideal Energy Ltd	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	12
Gapan Power Generation Ltd.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	12
Karachi Electric Supply Company Limited	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	12
Kohinoor Energy Limited	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	12
Kohinoor Power Company Limited	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	12
Kot Addu Power Company Limited	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	12
Nishat Chunian Power Limited						✓	✓	✓	✓	✓	✓	✓	07
Nishat Power Limited						✓	✓	✓	✓	✓	✓	✓	07
Pakgen Power Limited	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	12
Sitara Energy Limited	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	12
S. G. Power Ltd.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	12
Southern Electric Power Co. Ltd.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	12
The Hub Power Company Limited	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	12
Tri - Star Power Company Limited	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	12
Genertech Pakistan Limited	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	12
Observations	14	14	14	14	14	16	16	16	16	16	16	16	182