Available online at www.sciencedirect.com
SciVerse ScienceDirect
APCBEE Procedia 5 (2013) 265 – 270
Procedia APCBEE
www.elsevier.com/locate/procedia

ICESD 2013: January 19-20, Dubai, UAE

The Performance Assessment of Energy Companies

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Abstract

In the last two decades, in Europe and in Italy, the energy sector undergone a process of liberalization and opening up to competition that involved markets, institutions, companies and consumers. Liberalization has increased the environmental complexity of energy companies, shifting the priority of the management towards the formulation of strategies to gain market share and, at the same time, keep the old customers. The implemented strategies have been different depending on some company characteristics. In Italy, the geographical position has always influenced the company performances. Our paper aims to assess the economic and financial performances of companies, following the beginning of the liberalization process, focusing in particular on how geographical position have influenced the results.

Keywords: Company geographical position; the Italian energy market liberalization; economic and financial performances.

1. Introduction

The market reforms change almost every institutional facet of the industry, including its organisational setting, market structure, regulatory framework, and ownership arrangement.

In the last two decades in Europe, the EU Directives radically transformed the business environment, focusing on four critical issues of the energy industry [1]:

- Industrial organization: the traditionally vertically integrated organisation of the industry has been functionally unbundled, essentially into four segments of generation, transmission, distribution and retail. Therefore, the market witnessed the entry of many independent firms in the different stages of the supply

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doi:10.1016/j.apcbee.2013.05.046

chain.

- Competition within the EU: the Directives tried to facilitate the access of new companies entering every stage of the energy production such as generation, distribution, transmission and sale.
- Sectoral regulation: the EU created institutions and regulatory mechanisms common to its member countries, for example through the creation of national agencies and authorities.
- Privatization: in many countries the EU Directives started the privatization of many energy companies, both national and regional.

The study of the deregulation and liberalization effects on business strategies is a consolidated issue in the managerial disciplines [2, 3]. Also under an economic and regulatory point of view, the issue of liberalization impact has been extensively treated [4, 5]. Our paper is part of this field and its aim is to analyze the effects of liberalization on the performances of the retail companies belonging to the electricity and/or natural gas sectors in the Italian energy market. These two sectors has been considered as more significant in terms of the number of firms involved in the liberalization process. The purpose of this paper is the evaluation of the profitability, financial and liquidity performances subsequent to the reactions of the energy company management, following the market opening. This analysis is carried out taking into account the geographical position of the companies that significantly influence the strategic reactions of firms. Indeed, Italy is always affected by the so-called “southern issue”, which is the deep economic divide between the highly industrialized North and the South in which, even nowadays, several structural problems make the chances of economic progress difficult: the lack of infrastructures, a banking system which pay little attention to local needs, delays in a public administration often inefficient, the emigration of many young people caused by the limited economic growth and possibility to find a job, and the infiltration of organized crime into political and economic life.

The methodology adopted for our analysis consists in the computation of the main economic and financial indicators, derived from the financial statements for the three-year period 2008-2010. This period has been chosen because 2008 is the first year in which both sectors are fully liberalized. Indeed, while in the natural gas sector the liberalization process has been implemented since 2003, the energy market was fully liberalized only from July 1st, 2007: the date from which all end users are free to choose their supplier on the market. The paper is organized as follows: Section 2 explains the methodological approach describing the sample utilized and the analysis performed; Section 3 discuss the results about the geographical position of energy companies; Section 4 concludes.

2. Methodology and Data Set

Within the network based industries, following a worldwide wave of privatization, liberalization and sector reforms, the scientific analysis of the variable triangle consisting of competition, privatization and regulation and its effect on economic performance received much attention and resulted in numerous studies [6]. Alongside the surge of liberalization and regulatory reform, there has been increasing interest in the accurate evaluation of public utility performance [7, 8]. In general, the research on the effect of liberalization on economic performance evolves along two methodological strands of literature, either qualitative or quantitative. For example, in the Italian utilities sector, Asquer [9] carries out a qualitative analysis to compare the gas and water energy sectors with regard to the degree of competitive pressure and effect on industry performance. Quantitative researches have been carried out in many utility sectors such as natural gas, electricity, water and telecommunications [10-16], other studies provide an aggregate measure of relative efficiency for companies within their industry [17-19].

With regard to the natural gas market, Jamasb et al. [20] investigate the productivity and efficiency of US gas transmission companies from a benchmarking perspective, using data envelopment analysis and

Malmquist productivity indices; Capece et al. [21, 22] study the Italian retail market using a cluster analysis. In the same sector, Granderson and Linvill [23] analyze the US natural gas pipeline companies, considering the return on equity and the rate base as measures of financial performance and data envelopment analysis as a measure of cost, technical, and allocative efficiency.

The methodology used in this paper is financial statement analysis, which is a technique of comparing data from multiple balance sheets and comparing them over time (data from the same company) or space (data from different companies). In this manner it appears possible to study aspects of business management in addition to those expressed by the measure of income and operating working capital within certain limits.

This paper focuses on five indicators. Cash flow (CF) is employed as a financial indicator, whilst return on investment (ROI), return on sales (ROS) and return on equity (ROE) are used as the economic indicators. Leverage ratio (LR) is used as an indicator of capital, showing the degree of debt in comparison to equity.

The data set, supplied by the Unione Italiana delle Camere di Commercio (Italian Union of the Chambers of Commerce), comprises data relating to the 90 companies in our sample operating in Italy, including the balance sheet for each company.

3. Results Regarding Company Geographical Position

In this section we analyze the performance of energy companies with respect to the geographical position in order to verify if this characteristic affects the profitability, liquidity and financial results.

Before analyzing the financial statement results, the indicators were normalized in order to make the comparisons more homogeneous. Tables 1 shows the value ranges chosen for the various performance indicators utilized for the analysis of results. The ranges chosen for ROE, ROI, ROS and LR refer to the main literature (see among others [24]). As regards the assessment of CF, since expressed in an absolute measure (Euros, €), pre-established range cannot be used for all the companies. Therefore, we propose a model for evaluating the CF based on the relationship with the Invested Capital (IC). The purpose of the Cash Flow is to indicate the presence of cash flow within the company such as to ensure its survival. There is no doubt that, with the increase of IC (and therefore the number of assets to preserve), the demand for CF increases as well. This model evaluates the CF in terms of its proportion to the total investment of the company.

Table 1. Profitability and financial ranged indicators

Range	Performance	ROI (%)	ROE (%)	ROS (%)	CF	LR
1	Poor	$x<0$	$x<0$	$x<0$	$x<0$	$x>3$
2	Mediocre	$0\leq x<8$	$0\leq x<5$	$0\leq x<6$	$0\leq x<3\%IC^{*}$	$2<x\leq 3$
3	Good	$8\leq x<10$	$5\leq x<8$	$6\leq x<8$	$3\%\ IC^{*}\leq x<8\%IC^{*}$	$1<x\leq 2$
5	Excellent	$x\geq 10$	$x\geq 8$	$x\geq 8$	$x\geq 8\%IC^{*}$	$x\leq 1$

In figures 1, 2 and 3 we can highlight how the southern companies perform worse with respect to the north and central ones. This result is particularly marked in 2010, where the pentagons of the radar diagram are almost concentric and the smaller one is related to southern companies. These latter get the worst performance since they are mostly small and therefore characterized by competitive weaknesses. These firms have not been able to implement any reaction strategy following the liberalization of the sector and many of them have been cannibalized by new competitors.

Moreover, we can underline the structural competitive fragility that has always characterized the southern of Italy. There are many critical issues: excessive bureaucracy, the slowness of the local public administration, the quality of the local political class and the negative influence of organized crime on the economy. There are other structural problems aggravated by the current crisis, such as the debt insolvency, the late payment of the debt, the credit crunch and the refusal of funding.

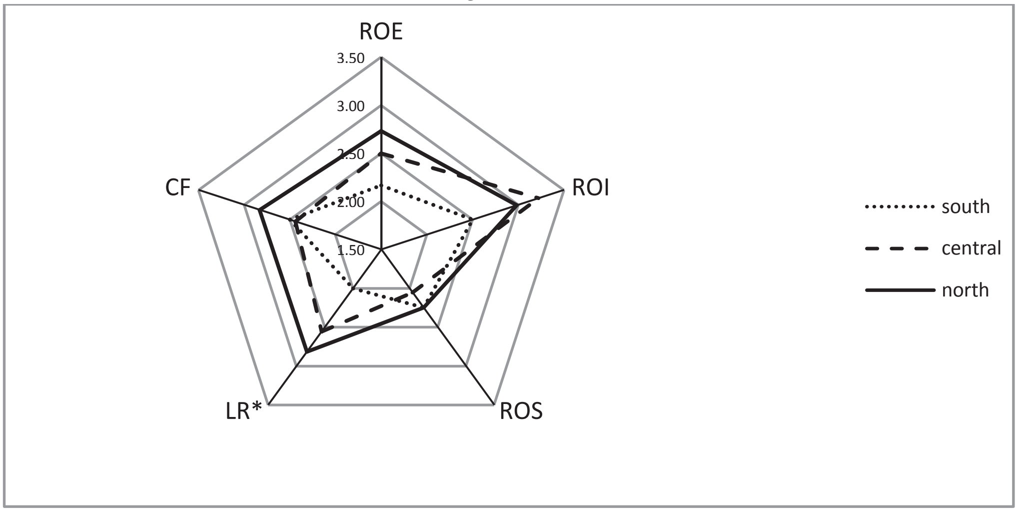

Fig. 1. Main economic and financial indicators in 2008.

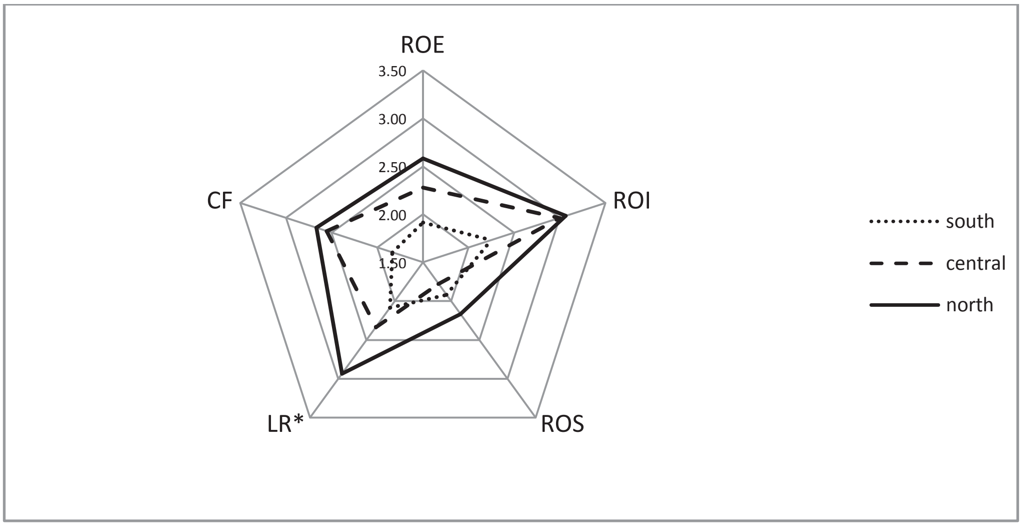

Fig. 2. Main economic and financial indicators in 2009.

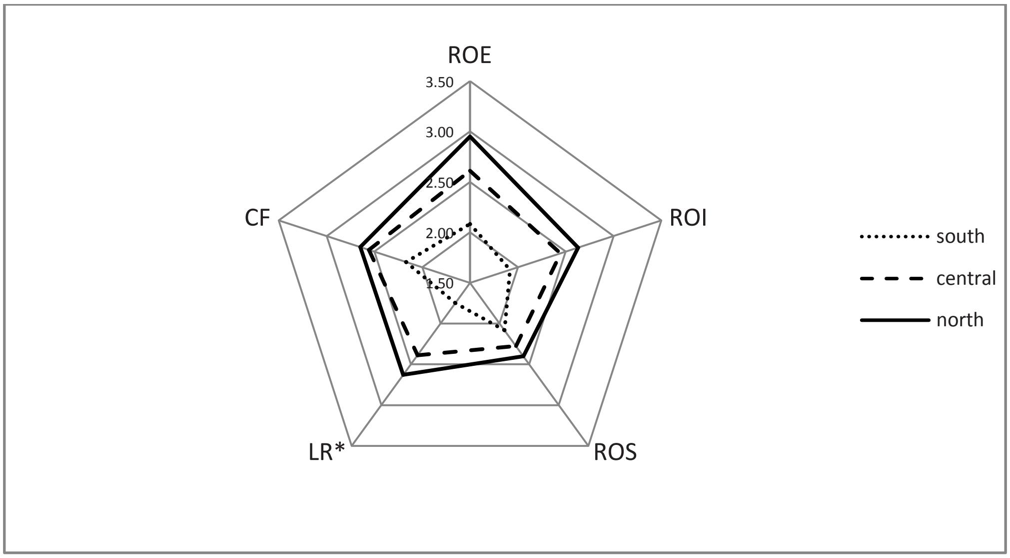

Fig. 3. Main economic and financial indicators in 2010.

4. Conclusion

The Italian liberalization process of energy markets forced the management of utilities sector to face new competitive challenges. Indeed, the main critical aspect for companies after liberalization has been the renewal of managerial skills in order to successfully face the market entry of new competitors and exploit the emerging opportunities.

In our paper, we evaluate the performance of a sample of 90 Italian energy companies, during the three-year period 2008-2010 in which both sectors of electricity and natural gas were liberalized. The performance evaluation was carried out using an analysis of financial statements and the calculation of the five main economic, financial and liquidity indicators. Our study has been carried out based on the company characteristic regarding the geographical position.

The results of our analysis highlight that the companies belonging to the south of Italy show a worsening of their performances, more evident in 2010. The change in the competitive context resulting from liberalization had a greater impact on southern companies which still have structural problems related to the industrial and infrastructural delay of the territory. Furthermore, with the worsening of the economic and financial crisis, which began in 2008, advanced economies have experienced the deepest recession in the last decades. Italy, characterized by several years of low growth, has been the only country between the major economies in the euro area to record a decline in GDP in 2008. The crisis mainly affected the financial sector:

the credit restrictions have negatively influenced the plans and expectations of enterprises located in the southern of Italy, especially the small ones.

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