Social performance of the electric utilities industry in the world: an exploration through a composite indicator

Paredes-Gázquez, Juan Diego
Universidad Nacional de Educación a Distancia (UNED)
Facultad de Ciencias Económicas y Empresariales
Calle Senda del Rey nº11, Despacho 3.32; 28040, Madrid (Spain)
(+34) 91 398 6354; juandiegoparedes@cee.uned.es

Rodríguez-Fernández, José Miguel
Universidad de Valladolid (UVA)
Facultad de Ciencias Económicas y Empresariales
Avenida del Valle de Esgueva, nº 6; 47011, Valladolid (Spain)
(+34) 98342 3950; jmrodrig@eco.uva.es

De la Cuesta-González, Marta
Universidad Nacional de Educación a Distancia (UNED)
Facultad de Ciencias Económicas y Empresariales
Calle Senda del Rey nº11, Despacho 3.32; 28040, Madrid (Spain)
(+34) 91 398 6354; mcuesta@cee.uned.es

Research Question: This study aims to explore the state of the social dimension in the electric utilities sector from a corporate social responsibility approach. For this purpose, a composite indicator that takes into account the complexity of the social dimension is constructed. This study applies methodologies never used before for treating corporate social responsibility.

Theoretical Framework: The importance of the electric utilities sector for social development has been recognized by International Organizations like the United Nations and the World Bank. At an empirical level, social dimension in the electric utilities sector has been studied mainly from an Economic Theory approach, focusing on the economical and socioeconomic aspects of the social dimension. In recent years, the International Atomic Energy Agency, in collaboration with other institutions (IAEA et al., 2005), has developed a set of social indicators that measure the electric utilities sector social dimension. Wilde-Ramsing (2009) describes the social impact of the electric utilities sector from a corporate responsibility approach, attending to pure social questions like Human Rights and Community, and suggesting indicators for its measurement. There is much work about social dimension in the electric utilities sector (e.g. Carrera and Mack, 2010; Stamford and Azapagic, 2011), but few have been done at an empirical level, and most of them have been focused on countries/regions rather than companies. This work tries to contribute to fill this gap.

Sample and methodology: 125 companies worldwide operating in the electric utilities sector and 50 indicators of the social dimension have been selected from Asset4 database. Indicators are divided into five groups according to its nature: employ, salary, labor conditions, various (labor issues) and various (social issues). For the indicator construction, the guidelines of the OCDE have been followed (OECD and JRC, 2008), being applied the benefit of the doubt approach. This approach allows us to detect social indicators prioritized by the companies, and as the same time permit us to know what social indicators companies perform best and worst. For assessing the indicator structure, multiple factor analysis has been applied; this methodology analyze the relationships between the groups of indicators. For exploring differences in social performance attending to the company country/region, one factor analysis of variance methodology has been applied.

Findings: The structure of the indicator analyzed reveals the relationship between indicators groups related to socioeconomic and legal issues (groups employ, salary and labor conditions) on the one hand and groups related to pure social issues (groups various (labor issues) and various (social issues)) on the other hand. The composite indicator constructed under the benefit of the doubt approach reveals that companies prioritize indicators related to legal issues (mainly labor conditions group), while indicators related to pure social issues have lower performance than others. The one factors analysis of variance reveals significant differences in the composite indicator score attending to the region of the country: European and South America companies perform better than North America ones.

References:

- Carrera, D.G. y Mack, A. (2010). Sustainability assessment of energy technologies via social indicators: Results of a survey among European energy experts. *Energy Policy*, **38**(2): 1030-1039.
- IAEA, UN, IEA, Eurostat and EEEA (2005). *Energy Indicators for Sustainable Development: Guidelines and Methodologies*. International Atomic Energy Agency, United Nations Department of Economic and Social Affairs, International Energy Agency, Eurostat and European Environment Agency.
- OECD and JRC (2008). *Handbook on constructing composite indicators: methodology and user guide*. Paris: OECD.
- Stamford, L. and Azapagic, A. (2011). Sustainability indicators for the assessment of nuclear power. *Energy*, **36**(10): 6037-6057.
- Wilde-Ramsing, J. (2009). *Quality Kilowatts: A normative-empirical approach to the challenge of defining and providing sustainable electricity in developing countries*. Stichting Onderzoek Multionationale Ondernemingen (SOMO) Centre for Research on Multinational Corporations and Program for Research and Documentation for a Sustainable Society (ProSus), Research Council of Norway.