

The Effect of Clustering on Sustainability Practices: A Study on Turkish Marble Enterprises

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Extensive Summary

Introduction

Sustainability with environmental, social and economic dimensions means that enterprises can understand risks and opportunities and accordingly rearrange their activities, products and services, as well as their business models and whole processes when necessary. These arrangements intended for sustainability require enterprises to make significant capital and expertise investments, have long term business plans, and train managers and employees for the language concerning sustainability to be understood. Sustainability, which requires long time and effort, can be facilitated with clustering (Has, 2013, p.2), which provides advantages such as geographical, cultural and corporate proximity to enterprises, special access to other enterprises, closer affiliations, easy access to knowledge, and obtaining strong incentives. Therefore, it has become important to understand characteristics of SMEs, which constitute the main stakeholder of clusters, and increase their qualifications for sustainable development.

According to OECD data, well managed and healthy structures of SMEs, which comprise 95% of all enterprises and 60% of all employees, is considered to be a significant source in terms of employment and development on account of their contribution to social stability and general tax revenues (WBCSD, 2004, p. 2). 99.6% of 2,406,720 enterprises that operate in our country are at a magnitude that is eligible for the SME definition of European Union. Among these enterprises, the number of individuals employed per workplace of mining and quarrying activity fields (average scale size) is 34.3 (Bayulken and Kutukoglu, 2012, p. 16). 83.6% of enterprises subject to the study comprise of SMEs, supporting this data. Therefore, the study intended to identify approaches of marble enterprises with SME characteristics, which are and are not members of clusters, to corporate sustainability practices. In this context, a qualitative study was conducted on 79 marble enterprises with SME characteristics, which operate in Iscehisar Specialized OIZ as members of a cluster and which operate in various provinces without being members of any cluster.

Method

The study was conducted in Iscehisar Specialized OIZ as well as on enterprises, which own marble quarries and make production in various provinces, without being members of any cluster. In this context, surveys conducted with a total of 79 marble enterprises, 45 of which operate in Iscehisar Specialized OIZ and 34 of which operate in various provinces of our country, were evaluated.

The study was conducted from May to October 2015. During the research, a survey with two sections was used as the data collection technique. Surveys were prepared in both manual format and digital format, and they were completed by senior managers. The study made use of the sectorial adaptation based on literature, utilizing scales implemented during studies by Hahn and Scheermesser (2006) on German enterprises; Yu (2004) on SMEs operating in China and Istanbul Stock Exchange (2011) on enterprises that were members of Istanbul Stock Exchange, as well as the scale generated by Tuna (2014) by means of validity and reliability studies. During the research, data obtained by means of the survey were analyzed with SPSS for Windows Software Package. Data obtained from the survey study, conducted on enterprises in Iscehisar Specialized OIZ and various provinces, were subjected to statistical analyses such as frequency, percentage, arithmetic mean, standard deviation and t-test according to the main scheme of the study. Achieved statistical values were evaluated with comparative analyses and hypotheses, comprising the foundations of the study, were tested.

Results

Sustainability practices of enterprises were compared by means of t-test according to whether they are members of a cluster; upon which H_0 hypotheses were rejected and H_1 hypotheses were accepted according to analysis results. In other words, a significant distinction was found in activities, conducted by enterprises for the purpose of reducing environmental influences and increasing social performance, between marble enterprises that were and were not members of a cluster.

During evaluations on reduction of negative influences on environment by enterprises in the sample group, a statistically significant difference ($p < 0.05$) was found between establishment that were and were not members of a cluster, in terms of holding EMAS and ISO 14001 certificates, being an explicit and accurate source of information for local population, suppliers and customers concerning the environmental influences of their products and services, and adoption of combating pollution after production is made.

During evaluations on social practices of marble enterprises, a statistically significant difference ($p < 0.05$) was found between establishment that were and were not members of a cluster, in terms of ensuring improvement of working conditions for the purpose of ensuring health and safety of employees, taking measures against all kinds of discrimination during and after recruitment, supporting suggestion system in order to ensure participation of employees in decision-making, providing individuals in local population with educational opportunities, and having an open dialogue with local population concerning controversial and delicate issues as well as issues that are unfavorable for the establishment. In conclusion, it was determined that enterprises that were members of a cluster considered the items listed above as the most effective

factors in their evaluations intended for reducing negative influences on the environment and increasing social performance.

Discussion and Conclusion

Clustering approach requires cooperation with other institutions and organizations. In this context, it was determined that a majority of enterprises that were members of a cluster worked in cooperation with other institutions/organizations and enterprises in respect of matters concerning sustainability such as reducing environmental pollution, water utilization and management, energy efficiency, waste management, innovation, new business opportunities, worker and employee trainings, occupational health and safety, ensuring qualified labor force, and participation in fairs. “*Occupational health and safety*” was regarded as one of the co-operational titles by almost all enterprises that were/were not members of a cluster (92.4%). 95.5% of member enterprises considered “*improvement of working conditions for the purpose of ensuring health and safety of employees*” as one of the factors effective in increasing social performance in furtherance of this title. Furthermore, it is also remarkable that 80% of enterprises, which were members of a cluster, cooperated with other enterprises in terms of “*new business opportunities*”. On the other hand, “*innovation activities*” were a matter of cooperation with other enterprises for only 31% of enterprises that were members of a cluster.

According to results of the study, only 8.9% of marble enterprises with SME characteristics, which were members of a cluster, held ISO 14001 while only 11.4% held OHSAS 18001, and none of the enterprises held other certificates (SA8000, AA1000, EMAS etc.) indicating formal management systems. Enterprises that were members of a cluster considered investment in clean technology as a factor influencing minimization of environmental effects; while, at the same time, considered combating pollution due to production to be necessary. However, clean technology is based on the philosophy of preventing generation of pollutants at the source and with integrated measures (Demirer, 2001, p.214). As these factors, considered by marble enterprises to be effective in minimization of environmental influences, and situations of such enterprises are evaluated; the inadequacy of knowledge on formal standards and environmental issues, as well as the lack of sincerity in responses, stand out.

When activities of enterprises regarding their social performances are evaluated, almost all enterprises, which were members of a cluster, stated that they were in cooperation with other institutions and organizations in terms of occupational health and safety, as well as employee trainings. In addition, taking measures against all kinds of discrimination, ensuring improvement of working conditions and participation of employees in decision-making were deemed as factors influencing improvement of social performance. However, as the levels of holding OHSAS 18001 (11.4%) and SA8000 (none of the enterprises hold the certificate) and considering these certificates to be effective, which show the sincerity of enterprises in this regard, are evaluated; it would not be wrong to say that enterprises are inadequate in terms of human rights.