The Effect of Green Intellectual Capital on Sustainable Performance: Evidence from the Spanish Wine Industry

Bartolomé Marco-Lajara,
University of Alicante, Spain
(bartolome.marco@ua.es)

Patrocinio Zaragoza-Sáez
University of Alicante, Spain
(patrocinio.zaragoza@ua.es)

Javier Martínez-Falcó
University of Alicante, Spain
(javier.falco@ua.es)

Lorena Ruiz-Fernández
University of Alicante, Spain
(lorena.fernandez@ua.es)

Abstract

◦*Purpose – Wineries are facing increasing pressures to improve their sustainable development, as the environment, the community and the local economy may be negatively affected by their activity. The wine industry is facing several exogenous factors that threaten its survival, such as: rising energy prices, water scarcity, increasing environmental awareness of stakeholders or climate change.*
This new context is characterized by requiring companies to make their productive activity compatible with the protection of the environment and the proper management of natural resources, allowing companies to realize that they must address the environmental challenge through the generation of new knowledge that will enable them to follow a sustainable development approach and, as a consequence, improve their competitiveness in the business environment of which they are a part. Thus, to accumulate and use their knowledge, companies adopt different approaches that are manifested through the different dimensions of Intellectual Capital (IC), these are: human capital, structural capital and relational capital. In this sense, the IC that incorporates environmental aspects, Green Intellectual Capital (GIC), was introduced in 2008, becoming an incipient field of study at present.
The motivation for this research is based on two basic premises. First, the correct management of GIC allows companies to identify their level of environmental responsibility, as well as to improve the Sustainable Performance (SP) of wineries. Secondly, GIC facilitates the improvement of SP through the knowledge gained, which is embodied, among other aspects, in Green Innovations (GI). Based on these ideas, the research aims to answer the following

research question: Does GIC influence the SP of wineries? and does GI mediate the relationship between these two variables?

◦Design/methodology/approach – The research follows a quantitative approach, using the second generation Partial Least Squares (PLS) multivariate analysis technique, i.e. variance-based Structural Equation Modelling (SEM). This methodology allows us to represent, estimate and test a theoretical model of linear relationships between variables that may be unobserved, i.e. latent variables, as we want to test in our research.
A structured questionnaire based on the literature review was used for data collection, with the aim of achieving greater coverage and making the results more representative. First of all, the content of the questionnaire was validated by a pre-test, in which Spanish experts in the strategic management of wineries participated. Then, the survey was distributed through the online survey tool Qualtrics in the last four months of 2021. The fieldwork provided 202 usable surveys (Spanish wineries), representing a response rate of approximately 5%.

◦Findings – The research shows the existence of a positive and significant relationship between GIC and SP, as well as the mediation of GI in this relationship.

◦Practical implications – The study contributes to the literature in several ways. First, GIC represents a new starting point for incorporating environmental practices in organizations, as GIC overcomes the shortcomings of conventional approaches to environmental management systems by considering the intangible assets of organizations. Secondly, the results presented identify a number of practices for managers to follow in order to develop effective environmental management. Third, no previous research addressing GIC in the wine industry has been identified.
The work is also noteworthy for its important practical implications, since it shows the need to improve the GIC of winery managers in order to improve SP and GI. On the one hand, to improve Green Human Capital (GHC), wineries can develop codes of good environmental practices, organize training and environmental awareness sessions, attend seminars and workshops to improve their green knowledge, as well as foster motivation and a sense of belonging to the group through the integrity of the environmental practices of winery managers. On the other hand, to foster Green Structural Capital (GSC), wineries can develop circular economy programs, IT systems to measure their carbon and water footprint, eco-efficient facilities, a brand linked to sustainability in foreign markets, certifications that endorse their environmental commitment, a flat organizational structure through which green knowledge flows, a suggestion box to convey suggestions to management, an organizational culture built on the pillars of sustainability, as well as investments in R&D&I. Finally, the Green Relational Capital (GRC) of wineries can be fostered through various alliances between industry organizations to improve their green knowledge.
