

University of Tartu

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MA of Quantitative Economics

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**Culture, ESG Performance and the Environmental
Kuznets Curve: A Cross-Country Analysis**

Master's Thesis Extended Abstract

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Topicality of the Subject

The purpose of this study is to investigate the relationship between national culture, environmental, social, and governance (ESG) performance, and environmental Kuznets curve (EKC) patterns of countries. The research question is: How does national culture influence the ESG performance and the EKC patterns of countries? The main argument is that national culture is a significant factor that affects both the ESG performance and the EKC patterns of countries and that countries with different cultural characteristics have different environmental and social outcomes.

Environmental, social, and governance (ESG) performance is a measure of how well a firm manages its environmental, social, and governance impacts and risks (David A. Katz & Laura A. McIntosh, 2021). ESG performance has become increasingly important for firms, investors, and stakeholders, as it reflects the firm's sustainability, reputation, and competitiveness (Eccles et al., 2014). However, the relationship between ESG performance and financial performance is not clear-cut, as it may depend on various factors, such as the industry, the market, the regulation, and the culture of the country where the firm operates (Friede et al., 2015).

The Environmental Kuznets Curve (EKC) is a hypothesis that suggests that there is an inverted U-shaped relationship between economic development and environmental degradation (Grossman & Krueger, 1994). According to the EKC, environmental degradation increases at the initial stages of economic growth but decreases after a certain level of income is reached. The EKC implies that economic growth can be compatible with environmental improvement in the long run (David I Stern, 2004).

However, the EKC hypothesis has been challenged by many empirical studies, which have found mixed or contradictory results (Stern, 2014). One possible explanation for the inconsistency of the EKC is that it does not consider the role of national culture, which may influence the perception, evaluation, and appreciation of ESG performance and environmental quality by different stakeholders (Park et al., 2007).

National culture can affect the ESG performance of firms by influencing their strategic choices, stakeholder relations, ethical standards, and social responsibility (Choi & Jung, 2008). National culture can also affect the EKC by influencing the environmental awareness, preferences and demand of consumers, investors, and regulators (Arshed et al., 2019).

This research question of how national culture moderates the relationship between ESG performance and the EKC is not yet addressed and therefore makes it quite interesting.

The Aim of the Research Paper

This research paper aims to examine the moderating role of national culture in the relationship between ESG performance and the EKC. The main question this research paper asks is “Is there a relationship between the ESG ratings of the countries and their environmental Kuznets curve patterns?”.

Other questions this research aims to answer are as follows:

- How does the national culture of the countries affect their ESG ratings and their environmental Kuznets curve patterns?
- What are the main factors that explain the variation in the ESG ratings and the environmental Kuznets curve patterns across the countries?
- How do the ESG ratings of the countries affect their economic growth and welfare?
- How do the environmental Kuznets curve patterns of the countries vary by region and income group?

Literature Review

The environmental, social, and governance (ESG) performance of countries or corporations is influenced by the society and culture where they operate (Katz, n.d.). Culture is a set of values, beliefs, norms, and practices that shape the behavior and preferences of individuals or groups in a society (Hofstede, 2001). Culture can affect the environmental Kuznets curve (EKC) patterns of countries or corporations, which is a graphical representation of the relationship between environmental degradation and economic growth over time (Grossman & Krueger, 1995). Some cultural dimensions, such as individualism, power distance, and uncertainty avoidance, can moderate or move the EKC, reflecting the different environmental challenges and opportunities different societies face (Arshed et al., 2022). Therefore, integrating ESG into the culture and values of countries or corporations can help them achieve long-term value creation, investor satisfaction, and environmental and social sustainability (Eccles et al., 2014).

The diagram in figure 1 below shows that culture influences both ESG ratings and EKC patterns and that ESG ratings are related to EKC patterns.

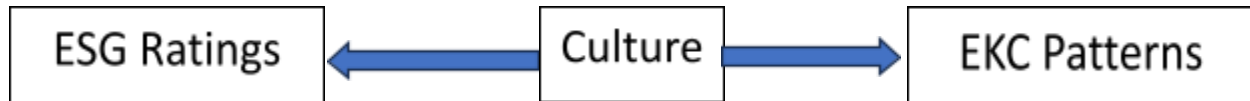


Fig 1. Relationship between ESG, Culture, and EKC

The literature review will provide an overview of the current knowledge on the concepts of national culture, ESG performance, and EKC patterns, and how they are related to other variables, such as corporate performance, carbon emissions, economic growth, and welfare. The literature review will also identify the gaps and limitations in the existing research and justify the need and significance of this study.

The literature review is organized as follows: The first section will discuss the concept and measurement of national culture and its dimensions and review the studies that have examined the impact of culture on various aspects of economic and social development. The second section will discuss the concept and measurement of ESG performance and its dimensions and review the studies that have explored the relationship between ESG performance and corporate performance, as well as the factors that influence ESG performance. The third section will discuss the concept and measurement of EKC patterns and its determinants and review the studies that have tested the hypothesis of the EKC and its variations across countries and regions. The fourth section will synthesize and evaluate the literature on the connections between national culture, ESG performance, and EKC patterns, and identify the gaps and limitations in the current knowledge. The fifth section will summarize the main findings and contributions of the literature review and explain how this study addresses the gaps and contributes to the knowledge on the topic.

Plans for Empirical Part

The data will consist of a sample of countries, covering the period from 2000 to 2022. The ESG performance data will be obtained from the S&P Global database, which provides ESG scores for countries based on their environmental, social and governance performance. The ESG

scores range from 0 to 100, with higher scores indicating better ESG performance. The EKC variable will be measured by the carbon dioxide (CO₂) emissions per capita, which is a proxy for environmental degradation. The CO₂ emissions per capita data will be obtained from the World Bank database, which provides data on the CO₂ emissions per capita for different countries and years. The national culture variables will be measured by Hofstede's cultural dimensions, which are power distance, individualism, masculinity, uncertainty avoidance and long-term orientation. Hofstede's cultural dimensions data has already been obtained, which provides data on the cultural dimensions for different countries. The control variables will include the gross domestic product (GDP) per capita, the energy efficiency, the energy intensity, and dummy variables. The GDP per capita data will be obtained from the World Bank database, which provides data on the GDP per capita for different countries and years.

The empirical part of the research paper will use a combination of regression analysis for testing the hypothesis of the EKC and the impact of Culture, and classification techniques to assign labels to each country based on their ESG profiles. Some of the hypotheses that will be tested to answer the questions of the paper are as follows:

- Countries with higher ESG ratings have lower levels of environmental degradation and faster transitions to the downward-sloping part of the EKC.
- Countries with higher levels of individualism, low power distance, and low uncertainty avoidance have higher ESG ratings and more favorable EKC patterns than countries with opposite cultural characteristics.
- The ESG ratings and the EKC patterns of the countries are influenced by their economic development, trade openness, institutional quality, and natural resource endowment.

We can use regression analysis for testing the hypothesis of the EKC and the impact of culture. ESG ratings of the countries will be dependent variables. We can have the macro variables and culture variables as regressors. We can adopt this to study the impact of culture as well as analyze if there is support for the Kuznets curve. We can also use classification techniques to assign a class label to each country based on their ESG ratings. For example, we could use a decision tree or a neural network to classify the countries into high, medium, or low ESG performers, and then compare their EKC patterns.

Furthermore, we could also explore CSR and SDG data as well, as these are related to ESG. CSR stands for corporate social responsibility, which is the voluntary commitment of businesses to act ethically and contribute to the social and environmental well-being of their stakeholders.

SDG stands for sustainable development goals, which are the 17 global goals adopted by the United Nations in 2015 to end poverty, protect the planet, and ensure peace and prosperity for all by 2030. The relationship between CSR and SDG of countries is that CSR can be seen as a way for businesses to align their strategies and operations with the SDGs and contribute to their achievement. For example, businesses can adopt CSR practices that reduce their environmental impact, support human rights, promote gender equality, improve health and education, and foster innovation and partnerships. By doing so, businesses can also enhance their reputation, competitiveness, and stakeholder relations (Bharti, n.d.). The relationship between national culture and CSR and SDG of countries is that national culture can also influence the perception, interpretation, and implementation of CSR and SDG across countries. Different cultural contexts may have different expectations and standards for what constitutes responsible and sustainable business practices. For example, countries with higher power distance may have a lower level of stakeholder engagement and transparency in CSR and SDG reporting. Therefore, it is important to consider the cultural diversity and specificity of each country when designing and implementing CSR and SDG policies and strategies.

The Structure

- Title
- Abstract
- Introduction
- Literature review
- Data & method(s)
- Results & discussion
- Conclusion
- References
- Appendixes

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