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## Article

# Emerging economies: An investigation of national culture and sustainable development

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## Article

# Emerging Economies: An Investigation of National Culture and Sustainable Development

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**Abstract:** The current study highlights the significance of national culture in advocating sustainable development, aligning with the goals outlined in the 2030 Agenda. It draws upon theories from various perspectives, including Classical Marxism, System Justification, Weber and the Ethic of Protestantism, and Postmaterialism. By examining the relationship between national culture and sustainable development, particularly in emerging economies, it addresses a gap in existing discourse. Using data from The Culture Factor Group website and the Global Sustainable Competitiveness Index provided by Solability in 2023, this study investigates how six of Hofstede's cultural dimensions relate to the sustainable competitiveness of emerging economies. The findings, based on a sample of 21 emerging economies sourced from diverse online platforms, indicate a significant relationship between national culture and sustainable development, particularly in terms of sustainable competitiveness. This study underscores the importance of recognizing culture as a key factor in achieving sustainable development goals, supporting its inclusion as a fundamental aspect in shaping policies and strategies aimed at fostering sustainable development in emerging economies.

**Keywords:** emerging economies; national culture; sustainable development; Hofstede's cultural dimensions; sustainable competitiveness



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## 1. Introduction

Sustainable development, according to the Brundtland Commission, consists of “paths of human progress which meet the needs and aspirations of the present generation without compromising the ability of future generations to meet their needs” (Estes 1993). Investigation into the uncharted territory of emerging economies as pioneers in the global economy (Nigam and Su 2011; Carrasco and Williams 2012) underscores the imperative of addressing sustainable development within these economies (Kumar and Das 2018). Sustainable production patterns in these economies are intertwined with their social demographics (Malik and Abdallah 2019), emphasizing the significance of comprehending these dynamics. This comprehension is paramount, as it yields insights into the developmental trajectories of these economies, especially given the ongoing infrastructure development that enhances their adaptability (Adrangi and Kerr 2022). Despite grappling with challenges stemming from weak institutional frameworks, emerging economies possess the potential to lead spearhead sustainable development initiatives (Forcadell and Aracil 2019). Nevertheless, the depletion of environmental resources poses a substantial threat to the quality of life within these economies (Veeravatnanond et al. 2012), highlighting the urgent need for sustainable practices.

The relationship between culture and sustainable development may seem evident (Kavaliku 2000; Meng et al. 2018; Khan et al. 2022; Lara and Silva 2023). Culture has a crucial role beyond economic aspects that involves fostering sustainable values and adaptation within societies (Duxbury et al. 2017; Chletsos and Sintos 2021). Recognizing culture as a

key component of sustainable development (Dessein et al. 2015) provides opportunities to develop a comprehensive societal ethos that extends beyond preservation efforts (Kagan et al. 2018). Then, national cultural frameworks significantly shape sustainable development goals (SDGs) and outcomes (Piwowar-Sulej 2022; Sintos et al. 2024), highlighting the intrinsic association between culture and sustainable development. Therefore, achieving sustainable development depends on aligning cultural diversity with objectives of social equity, environmental responsibility, and economic viability (Nurse 2006). Abstracting sustainable development from its socio-cultural context poses challenges and requires nuanced approaches (Sedita et al. 2022).

The multifaceted role of culture in sustainable development is contingent upon diverse interpretations, ranging from tangible accomplishments to intangible aspects and societal norms, delineating discussions typically segmented into understanding its constituent elements and functional dynamics within society (Zheng et al. 2021). Seminal contributions, exemplified by the Hangzhou Declaration and the Florence Declaration, advocate for the integration of cultural dimensions into sustainable development frameworks (Wu et al. 2016; Wiktor-Mach 2020). These initiatives underscore culture's transformative potential in shaping sustainable policies and practices. Furthermore, the recognition of intangible cultural heritage in sustainable development efforts accentuates the multifaceted nature of culture's contribution (Rodgers and van Oers 2011).

Emphasizing the indispensable role of national culture (NC) in guiding societies toward sustainable development (Leonavičienė et al. 2022) aligns with the 2030 Agenda (Kangas et al. 2017). Despite variations in the cultural perception of sustainability parameters (Pink 2018), the United Nations' SDGs strive for global convergence, recognizing culture as a significant enabler of sustainability endeavors (Tehrani et al. 2021). The integration of culture and sustainability objectives serves as a foundational premise for strategic action in attaining SDGs (Kangas et al. 2017).

As the importance of culture in sustainable development gains increasing recognition, research strives to clarify this relationship. However, there is a noticeable gap in the literature, particularly regarding emerging economies, where the connections between culture and sustainable development remain under-researched. This gap is especially prominent in studies examining the relationship between them using established metrics like the SDG index and the Global Sustainable Competitiveness Index (GSCI).

Indeed, sustainability and competitiveness are interconnected (Balkyte and Tvaronavičienė 2010), and discussions on sustainable competitiveness have been a crucial part of sustainable development (Popescu et al. 2017; Doyle and Perez-Alaniz 2017; Herciu and O'Grian 2014). The theories of Classical Marxism, System Justification, Weber and the Ethic of Protestantism, and Postmaterialism have elucidated the nexus between culture and competition within economic contexts (Hayward and Kemmelmeier 2007). According to Hayward and Kemmelmeier (2007), the Marxian perspective asserts a direct relationship between socio-economic status and value systems, contending that individuals' ideological predispositions are shaped by their material circumstances. In contrast, the System Justification theory posits that individuals often ideologically align with and perpetuate prevailing economic paradigms, irrespective of their position within the socio-economic hierarchy. Embedded within Protestantism are distinct doctrinal principles that frequently endorse competition as indispensable and favorable, echoing Marx's assertion regarding the interplay of ideology and material reality and potentially bolstering capitalist frameworks. Furthermore, the Postmaterialist concept suggests that as individuals' material needs are fulfilled, there is a gradual evolution of values, transitioning from survival-oriented priorities to an emphasis on self-expression. These shifts in value orientation carry implications for societal perceptions of competition and economic systems, particularly as economies progress and material abundance becomes more widespread.

This study aims to investigate the relationship between NC and sustainable development in emerging economies. The scholarly significance of this research lies in its rigorous effort to validate the consistency of previous findings concerning the interaction between

these two constructs. To firmly position this study within the existing scholarly discourse, it is crucial to conduct a comprehensive review of the current state of research in this field, with meticulous attention to citing seminal works.

Previous studies have compared Hofstede's cultural dimensions with various sustainability indices, such as the Dow Jones Sustainability Index (DJSI) (e.g., [Tehrani et al. 2021](#)) and the Sustainable Development Index (SDI) (e.g., [Sedita et al. 2022](#)). This study makes a novel contribution by conducting a comparative analysis of Hofstede's cultural dimensions with the GSCI for 2023. This approach provides insights into the intersection of global culture and sustainability in emerging economies.

Based on two research questions, "do emerging economies share similar NC?" and "do they demonstrate comparable levels of sustainable competitiveness?", this study hypothesizes relationships between Hofstede's six cultural dimensions (power distance, individualism, motivation towards achievement and success, uncertainty avoidance, long-term orientation, and indulgence) and sustainable competitiveness, as measured by the GSCI developed by [Solability \(2023\)](#). The GSCI adapts the environmental, social, and governance model at the national level, adjusting key pillars and indicators to evaluate a country's capacity for sustainability-driven economic performance. This model integrates natural capital, resource efficiency, sustainable innovation, and social cohesion as fundamental factors influencing a country's ability to generate and maintain sustainable wealth ([Solability 2013](#)).

## 2. Literature Review

### 2.1. Emerging Economies and National Culture

Since the seminal exposition by Hoskisson and associates in 2000, a plethora of scholarly works have emerged to advance the boundaries of research pertaining to emerging economies. Notably, numerous scholars have delineated these economies as contexts wherein institutional shortcomings attenuate both imitative behaviors and competitive pressures ([Hermelo and Vassolo 2010](#)). In the past two decades, the economic environment has witnessed the dominance of a growing number of firms from emerging economies ([Luo et al. 2011](#)). Their ascent signifies profound shifts in global dynamics, challenging the longstanding dominance of north–south relations over the past two centuries and ushering in an emerging east–south paradigm to elucidate the pivotal transformations characterizing the 21st century and reframe the forefront of globalization scholarship ([Nederveen Pieterse 2017](#)).

Emerging economies, characterized by low-income status and rapid growth, predominantly rely on economic liberalization for progress, encompassing developing nations across regions like Asia, Latin America, Africa, and the Middle East, as well as transition economies, including former Soviet Union territories and China ([Hoskisson et al. 2000](#); [Young et al. 2014](#)), with growth sustaining until spring 2023 despite notable disparities ([Faure 2023](#)). These encompass the BRIC nations—Brazil, Russia, India, and China—identified by Jim O'Neill in 2001 as poised for significant growth, with Brazil and Russia possessing abundant natural resources and India and China boasting large populations, particularly with China expected to excel in manufacturing due to its robust industrial base ([Borker 2012](#)). Emerging economies' firms, as they expand globally and confront foreign multinational companies domestically, encounter difficulties stemming from their organizational practices and management methods grounded in local institutional environments ([Young et al. 2014](#)). Below is Table 1, listing emerging economies across America, Africa, Asia, Europe, and the Middle East.

At the same time, the exploration of global cultural dynamics commences with an analysis of the interaction between national and democratic universal cultures, offering preliminary insights but unveiling deeper complexities across various societal strata ([Ergashev and Farxodjonova 2020](#)). Economists are increasingly integrating cultural factors into economic growth theories, acknowledging the profound influence of culture on development trajectories ([Horvat et al. 2021](#)). Culture is construed as a human-made environment, shape

values, attitudes, and behaviors within specific temporal and spatial contexts (Oyserman 2017). This transformation becomes apparent through the juxtaposition of national and universal cultural frameworks, posing methodological challenges in scrutinizing cultural intricacies across different societal hierarchies (Ergashev and Farxodjonova 2020).

**Table 1.** List of emerging economies 2023.

No	Country/Regions	Economy	Geography
1	Brazil	Transitioning from ‘developing’ to ‘developed’ status, part of BRICS, with strong macroeconomic framework	South America
2	Indonesia	A mixed economy, a member of G20 as a newly industrialized country	Southeast Asia
3	Poland	On a clear upward trajectory with significant GDP growth and projections	Central Europe
4	Chile	Steady GDP and GDP per capita growth	South America
5	Russia	Ongoing economic reforms and challenges	Eastern Europe and North Asia
6	Peru	Significant growth driven by natural resources reforming for stability	South America
7	Qatar	High income from oil and gas, but diversifying economy	Middle East
8	China	Rapid growth, industrialization	East Asia
9	South Africa	Rich resources, infrastructure development, and political stability position	Southernmost part of the African continent
10	South Korea	Renowned for industrialization and global trade influence, with strategic government policies driving growth	Eastern Asia
11	Colombia	Steady growth and regional influence	The northwest corner of South America
12	Saudi Arabia	Transitioning economy with Vision 2030 plan to diversify and modernize	Middle East
13	Argentina	Diverse economic sectors, natural resources	Southern part of South America
14	Vietnam	Rapid growth, government reforms, and resilience	Southeast Asia
15	India	Large, diverse, and rapidly growing economy with global influence, driven by robust growth and reforms	South Asia
16	Malaysia	Ongoing development with growth potential and economic reforms	Southeast Asia
17	Thailand	Consistent growth, diversified sectors, and investment-friendly policies	Southeast Asia
18	Hungary	Transitioned from centrally planned to market-based economy, achieving high development	Central Europe
19	Taiwan	Advanced technology sector and infrastructure	East Asia
20	Morocco	Significant growth, diversified sectors, and stability	Northwest corner of Africa
21	Mexico	Significant growth, diversified sectors, and stability	A federal republic in North America
22	Philippines	Diverse industrial sectors, despite facing challenges such as infrastructure deficits and income inequality, its strategic location, young population	Southeast Asia

Source: Google (2024).

Scholars present diverse definitions of culture, but they agree on its crucial role in societal dynamics (Shaiq et al. 2011; Hofstede 2011; Dartey-Baah 2013). Hofstede’s seminal work identified fundamental cultural dimensions, significantly impacting cross-cultural interactions and societal frameworks (Jones 2007). His study, alongside Ronald Inglehart’s, commands substantial scholarly attention, evidenced by citations exceeding 200,000, thereby positioning them as influential figures in the realm of social science

(Beugelsdijk and Welzel 2018). This attempt sheds light on enduring cultural value systems and their broader global ramifications (Hofstede and Usunier 2003).

Moreover, cultural disparities not only inform the perception and management of strategic issues but also shape strategic approaches themselves (Schneider and De Meyer 1991). Hofstede's conceptualization of culture as "the collective programming of the mind" serves as a foundational construct for comprehending national cultures and their strategic implications (Ruanguuttamanun 2023). This understanding extends to how cultural variations in uncertainty avoidance influence responses to ambiguous situations (Broeder 2023). Hofstede's framework, iteratively expanded over time, acknowledges the nature of cultural dynamics and their strategic significance (Minkov et al. 2023).

Hofstede's cultural dimensions, in a nutshell (Hofstede 2011), are listed below:

1. Power distance, a foundational concept in organizational and societal studies, examines individuals' acceptance of unequal power distributions within institutions and familial structures. It underscores that societal tolerance of inequality is shaped by both leaders and members, highlighting power differentials as inherent to societal structures.
2. Individualism and collectivism delineate how individuals integrate into societal groups. Individualistic cultures prioritize autonomy, while collectivist cultures emphasize communal harmony, with these cultural values significantly impacting power dynamics.
3. Motivation towards achievement and success portray gendered value distributions and are central in sociological discourse, intersecting with power dynamics through societal expectations regarding gender roles.
4. Uncertainty avoidance, distinct from risk avoidance, gauges a society's tolerance for ambiguity. It reflects how cultures condition individuals to handle unstructured situations, with high uncertainty avoidance cultures seeking to minimize ambiguity through strict norms and adherence to absolute truths.
5. Long-term orientation emphasizes values like persistence and hierarchy, contrasting with short-term orientation's focus on immediate obligations and tradition, influencing power dynamics accordingly.
6. Indulgence versus restraint, introduced by Minkov, complements existing dimensions by assessing societal norms around self-expression and desires, impacting power structures within societies.

## 2.2. National Culture and Sustainable Development

Interest in sustainable development has surged over recent decades (Estes 1993; Connelly 2007; Klopp and Petretta 2017), driven largely by influential works like the United Nations' Brundtland Commission report "Our Common Future" in 1987 (Jabareen 2008; Bilbao-Osorio et al. 2013; Hák et al. 2016). This heightened interest is reflected in various economic indices, including the Environmental Sustainability Index (ESI), Environmental Performance Index (EPI), Climate Change Performance Index (CCPI), Human Development Index (HDI), Index of Sustainable Economic Welfare (ISEW), and Global Competitiveness Index (GCI) (Popescu et al. 2017).

Sustainable development, as defined by the UN's Brundtland Report in 1987, aims to meet the needs of the present without compromising the ability of future generations to meet their own needs. This definition underscores the importance of balancing economic, social, and environmental considerations to ensure that development today does not deplete resources or harm ecosystems needed for future generations. The World Commission on Environment and Development (WCED), commonly known as the Brundtland Commission, describe sustainable development similarly as development that meets the needs of the present without compromising the ability of future generations to meet their own needs. This perspective emphasizes the intergenerational equity and responsibility in managing resources and environmental impacts.

The International Institute for Sustainable Development (IISD) defines sustainable development as the process of improving the quality of human life while living within the

carrying capacity of supporting ecosystems. This definition highlights the dual goals of enhancing human well-being and maintaining ecological balance, ensuring that development efforts do not exceed the Earth's natural limits.

Within the European Union (EU), sustainable development is understood as development that meets the needs of the present without compromising the ability of future generations to meet their own needs. This definition integrates economic, social, and environmental dimensions, emphasizing the importance of comprehensive approaches to governance.

According to the United Nations Development Programme (UNDP), sustainable development involves improving the quality of human life while living within the carrying capacity of supporting ecosystems. This definition emphasizes sustainable practices that enhance societal well-being without depleting natural resources or causing environmental degradation, promoting resilience and equity across communities. These definitions collectively underscore the holistic approach to sustainable development, emphasizing the need for integration across economic, social, and environmental dimensions to achieve long-term prosperity and well-being for current and future generations.

In today's economic landscape, understanding the significance of sustainable competitiveness and its stakeholders is essential (Klarin 2018; Rajnoha and Lesnikova 2022). This notion encompasses various interconnected elements within the economic realm (Doyle and Perez-Alaniz 2017). Its objectives include recognizing the pivotal role of sustainable competitiveness in fostering economic prosperity, understanding the links between determinants of long-term economic growth and social and environmental sustainability, conducting initial comparative evaluations of countries' standings concerning different facets of sustainable competitiveness, and addressing the deficiency of high-quality economic data necessary for countries to strategize effectively in these crucial domains (Despotovic et al. 2018).

Sustainable competitiveness integrates the assurance of economic competitiveness and sustainable development, emphasizing the achievement and retention of competitive advantage while nurturing long-term economic viability through efficiency, environmental stewardship, social responsibility, and a commitment to ongoing enhancement, evaluated and supported through economic methodologies such as sustainability reporting, life cycle assessment, triple bottom line accounting, sustainable supply chain management, and adherence to certification standards (Salimova et al. 2018). This form of competitiveness, which amalgamates the economic interests underlying sustainable development and international competitiveness, places environmental preservation and strategies promoting economic growth under a shared economic framework (Weiss 1993).

In the economic environment, sustainable competitiveness denotes a nation's capability to fulfill the economic needs and fundamental requisites of current generations while preserving or expanding economic wealth for the future without depleting economic resources (Solability 2013). It is based on four fundamental pillars that together form the base capability of a country to generate and sustain sustainable wealth, i.e., wealth that is not in danger of being reduced or diminished through the overexploitation of resources (natural and human), the lack of innovative edge required to compete in the global markets, or the exploitation of segments of society. These four pillars are:

1. **Natural capital:** this refers to a nation's natural environment and its resources, including how these resources are used and if they are being depleted.
2. **Resource intensity:** this measures how efficiently a country uses its resources, whether they are from within the country or imported, in comparison to its competitiveness in a world where resources are limited.
3. **Sustainable innovation:** this is about a country's ability to create wealth and jobs through innovative industries in the global market while aligning with sustainability goals.
4. **Social cohesion:** this evaluates the overall well-being of a nation's people, considering aspects like equality, security, and freedom, all of which contribute to sustainable development.

Moreover, each aspect of cultural dimensions can impact sustainable competitiveness differently:

1. Power distance: This dimension reflects how societies manage power inequalities. In societies with high power distance, hierarchical structures are more accepted, potentially influencing the adoption and enforcement of sustainable practices.
2. Individualism vs. collectivism: This dimension contrasts societies that prioritize individual achievement with those valuing group harmony. Individualistic cultures may drive innovation and competitive strategies, while collectivist cultures may prioritize communal well-being in sustainability efforts.
3. Motivation towards achievement and success: Cultural emphasis on ambition and success often drives economic competitiveness. In sustainable contexts, this motivation can lead to innovation in green technologies and sustainable practices.
4. Uncertainty avoidance: Societies with high uncertainty avoidance prefer clear rules and structured environments. This can influence stringent environmental regulations and a preference for stable economic and environmental policies.
5. Long-term vs. short-term orientation: Cultures vary in their focus on future planning versus immediate results. Long-term oriented cultures may invest in sustainable infrastructure and practices, while short-term oriented cultures may prioritize immediate economic gains.
6. Indulgence vs. restraint: This dimension contrasts cultures that allow versus those that restrict the gratification of human desires. Indulgent cultures may encourage innovation in sustainable practices, while restrained cultures may promote conservation and resource management.

**Hypothesis 1.** *Power distance is related to sustainable competitiveness.*

**Hypothesis 2.** *Individualism is related to sustainable competitiveness.*

**Hypothesis 3.** *Motivation towards achievement and success is related to sustainable competitiveness.*

**Hypothesis 4.** *Uncertainty avoidance is related to sustainable competitiveness.*

**Hypothesis 5.** *Long-term orientation is related to sustainable competitiveness.*

**Hypothesis 6.** *Indulgence is related to sustainable competitiveness.*

**Hypothesis 7.** *National culture is related to sustainable competitiveness.*

### **3. Data and Methods**

#### *3.1. Data and Sample*

This secondary research employs data sourced from The Culture Factor Group website (<https://www.hofstede-insights.com/country-comparison-tool>, accessed on 17 April 2024) concerning cultural dimensions within national contexts, along with data from Solability regarding The Global Sustainable Competitiveness Index, spanning from 2014 to 2023. Both sets of data were collected online from mid-April to early May 2024. The study's sample consists of 22 emerging economies collected through Google. Presented below are the tabulated findings (Table 2):

Table 2. Hofstede’s cultural dimensions 2023.

No	Country/ Regions	Hofstede’s Cultural Dimensions (%)					
		Power Distance	Individualism	Motivation towards Achievement and Success	Uncertainty Avoidance	Long-Term Orientation	Indulgence
1	Brazil	69	36	49	76	28	59
2	Indonesia	78	5	46	48	29	38
3	Poland	68	47	64	93	49	29
4	Chile	63	49	28	86	12	68
5	Russia	93	46	36	95	58	20
6	Peru	86	20	42	87	5	46
7	Qatar	93	18	55	80	14	Unavailable
8	China	80	43	66	30	77	24
9	South Africa	49	23	63	49	18	63
10	South Korea	60	58	39	85	96	29
11	Colombia	67	29	64	80	6	83
12	Saudi Arabia	72	48	43	64	27	14
13	Argentina	49	51	56	86	29	62
14	Vietnam	70	30	40	30	47	35
15	India	77	24	56	40	51	26
16	Malaysia	100	27	50	36	47	57
17	Thailand	84	19	34	64	67	45
18	Hungary	46	71	88	82	45	31
19	Taiwan	58	40	45	69	87	49
20	Morocco	70	24	53	68	25	25
21	Mexico	81	34	69	82	23	97
22	Philippines	94	17	64	44	46	42

Source: The Culture Factor Group (2024).

Based on the findings delineated in Table 2, emerging economies exhibit considerable heterogeneity across six cultural dimensions. First, concerning power distance, the range spans from 46 to 100, with a notable presence of 19 economies registering elevated scores (>50), juxtaposed with 3 others displaying lower scores (<50). This disparity underscores the variations in hierarchical structures and power dynamics within these contexts.

Second, the dimension of individualism underscores a diverse spectrum, extending from 5 to 71, wherein 3 economies demonstrate pronounced levels of individualistic orientation, while 19 economies exhibit comparatively lower scores. This distribution underscores the varied emphasis placed on personal autonomy and collectivism across emerging economies.

Third, the motivation towards the achievement and success dimension reveals a range from 28 to 88, with 11 economies manifesting elevated levels, 10 displaying diminished levels, and 1 exhibiting a neutral midpoint score of 50 percent. This distribution highlights the multifaceted nature of gender role orientation and the associated societal values across these economies.

Fourth, the uncertainty avoidance dimension spans from 30 to 93, showcasing a prevalence of 15 economies with heightened scores indicative of a proclivity towards risk aversion, juxtaposed with 7 economies displaying lower scores. This disparity underscores the differential approaches towards ambiguity and risk management prevalent within these societies.

Fifth, the long-term orientation dimension portrays a range from 5 to 87, with 6 economies exhibiting a protracted temporal orientation, while 16 economies evince a contrasting emphasis on short-term goals. This distribution underscores the divergent temporal perspectives and orientations towards future planning and adaptability.

Last, the indulgence dimension ranges from 14 to 97, illustrating 7 economies with elevated scores indicative of a propensity towards gratification and enjoyment, while 14 economies exhibit lower scores. Additionally, one nation lacks a recorded score. This

variance underscores the differential attitudes towards gratification, restraint, and impulse control within these contexts.

This dataset underscores the imperative for a comprehensive understanding and contextualization of cultural dimensions within emerging economies, elucidating the multifaceted nature of societal values, norms, and behavioral orientations prevalent within these dynamic contexts.

Table 3 below details the global sustainable competitiveness of emerging economies over a ten-year period from 2014 to 2023 for 22 countries, though data are only available for 21 of them. The left side presents the rankings, while the right column lists the scores. This information is organized by the authors using data from Solability.

**Table 3.** Global sustainable competitiveness of emerging economies 2014–2023.

No	Country/ Regions	Ranks per Year										Score per Year (%)									
		2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
1	Brazil	21	24	41	42	42	49	54	52	46	65	48.2	47.3	46.9	47.6	47.6	46.8	49.1	48.8	47.1	44.8
2	Indonesia	35	43	57	66	66	66	68	75	57	86	46.1	45.2	45.0	44.7	44.7	45.41	47.4	46.5	45.7	42.8
3	Poland	25	26	25	25	25	21	26	35	29	29	47.2	46.8	49.2	51.2	51.2	51.9	52.8	51.2	51.2	51.6
4	Chile	69	75	62	65	65	58	41	38	44	40	43.4	42.1	44.6	44.9	44.9	45.9	50.6	50.4	47.3	48.6
5	Russia	45	33	45	43	43	51	48	50	-	47	45.8	46.3	46.6	47.5	47.5	46.7	49.9	49.2	-	47.0
6	Peru	37	38	30	30	30	45	49	39	41	48	46.0	45.9	48.0	49.2	49.2	47.3	49.9	50.3	47.8	47.0
7	Qatar	75	67	68	106	106	112	150	146	122	129	42.8	42.9	44.2	41.6	41.6	40.8	40.9	39.3	38.9	39.7
8	China	20	25	37	32	32	37	39	33	31	30	48.3	47.2	47.2	48.9	48.9	48.5	50.8	51.4	51.1	51.0
9	South Africa	95	124	158	141	141	138	157	147	138	131	40.9	38.2	36.5	39.2	39.2	38.8	39.9	39.3	37.6	39.6
10	South Korea	23	40	40	16	16	27	35	21	12	21	47.6	45.7	46.9	53.3	53.3	50.8	51.3	53.9	55.9	53.2
11	Colombia	40	45	43	52	52	52	70	54	50	51	45.9	45.2	46.7	46.6	46.6	46.7	47.4	48.7	46.6	46.6
12	Saudi Arabia	43	36	113	100	100	110	108	114	102	126	45.9	45.9	40.4	42.0	42.0	41.0	44.1	42.3	40.8	39.8
13	Argentina	39	46	48	61	61	69	64	55	48	46	45.9	45.1	46.2	45.4	45.4	45.0	48.1	48.6	46.9	47.5
14	Vietnam	79	91	92	103	75	78	91	115	68	54	42.4	41.2	42.4	41.8	43.9	44.4	45.6	42.2	44.2	46.3
15	India	133	131	152	121	121	130	127	135	120	121	38.0	37.7	36.9	40.5	40.5	39.5	42.4	40.9	39.3	40.2
16	Malaysia	42	51	33	51	51	55	73	67	75	71	45.9	44.6	47.4	46.7	46.7	46.4	47.0	47.3	43.1	44.3
17	Thailand	101	104	100	109	109	82	66	88	64	81	40.5	40.0	41.6	41.2	41.2	43.8	47.6	45.0	44.7	43.6
18	Hungary	46	47	35	40	40	31	24	36	42	38	45.7	45.0	47.3	47.8	47.8	49.2	52.9	50.8	47.7	49.4
19	Taiwan	Unav- ailable	Unav- ailable	Unav- ailable	Unav- ailable	Unav- ailable	Unav- ailable	Unav- ailable	Unav- ailable	Unav- ailable	Unav- ailable										
20	Morocco	146	133	138	160	160	119	133	103	109	120	36.9	37.4	38.1	37.1	37.1	40.4	41.6	43.1	40.3	40.4
21	Mexico	70	85	69	67	67	75	83	89	92	105	43.4	41.4	44.2	44.7	44.7	44.4	46.4	44.9	41.6	41.1
22	Philippines	117	115	97	105	105	103	102	118	86	90	39.4	39.0	42.0	41.6	41.6	41.7	44.7	42.0	41.9	42.3

Source: Solability (2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023).

According to Table 3, the competitiveness of emerging economies globally showed significant variations over consecutive years. Taiwan's data were unavailable in the dataset, resulting in a reduced sample size of 21 emerging economies for this study. This adjustment is acknowledged, and efforts are made to ensure that subsequent analyses and conclusions maintain robust methodological rigor.

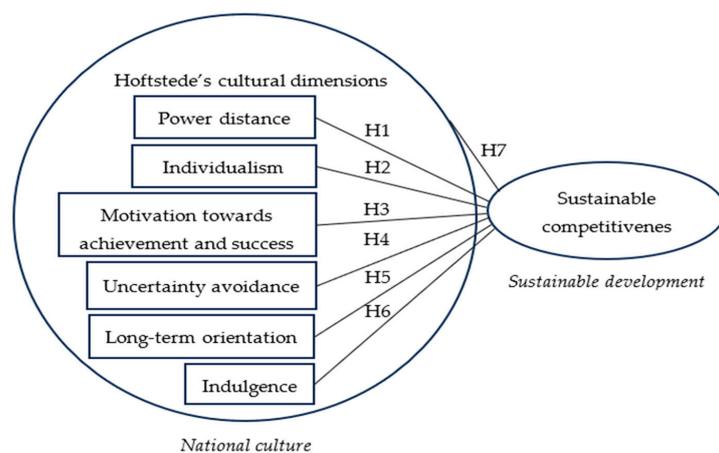
In 2014, competitiveness scores exhibited a wide range, from 36.9 (ranking 146) to 48.3 (ranking 20) (Solability 2014). This trend continued in subsequent years with notable fluctuations: in 2015, scores ranged from 37.4 (ranking 133) to 47.3 (ranking 24) (Solability 2015); in 2016, the range extended from 36.5 (ranking 158) to 49.2 (ranking 62) (Solability 2016); in 2017, there was a discernible dispersion from 37.1 (ranking 160) to 53.3 (ranking 16) (Solability 2017); 2018 showed a similar spread from 37.1 (ranking 160) to 53.3 (ranking 16) (Solability 2018); in 2019, scores varied from 38.3 (ranking 138) to 51.9 (ranking 21) (Solability 2019); in 2020, the range extended from 39.9 (ranking 157) to 52.9 (ranking 24) (Solability 2020); 2021 followed a comparable trajectory, with scores ranging from 39.3 (ranking 156) to 53.9 (ranking 21) (Solability 2021); in 2022, there was a divergence between 37.6 (ranking 138) and 55.9 (ranking 12) (Solability 2022); and finally, in 2023, scores spanned from 39.6 (ranking 131) to 53.2 (ranking 21) (Solability 2023).

### 3.2. Methods

This research undertakes a comprehensive examination of the reciprocal dynamics between culture and sustainable development within emerging economies, with particular emphasis on the pivotal role of NC in shaping sustainable development outcomes. Leveraging Hofstede's renowned six-dimensional cultural model as a methodological scaffold, the current study endeavors to discern the nuances of national cultural attributes, while

concurrently employing The GSCI between 2014 and 2023 provided by Solability to assess the state of sustainable development across these nations.

In pursuit of a rigorous statistical inquiry, the study initiates with a quantitative descriptive analysis supported by the Statistical Package for the Social Sciences (SPSS) to answer the two research questions: “do emerging economies share similar NC?” and “do they demonstrate comparable levels of sustainable competitiveness?” This methodological approach aims to meticulously elucidate the patterns of convergence evident in both national culture (research question 1) and sustainable competitiveness (research question 2) among emerging economies. Subsequently, a quantitative analysis is employed to delve into the statistical relationship between the six dimensions of national culture and sustainable competitiveness (hypotheses 1 to 7): power distance is related to sustainable competitiveness, individualism is related to sustainable competitiveness, motivation towards achievement and success is related to sustainable competitiveness, uncertainty avoidance is related to sustainable competitiveness, long-term orientation is related to sustainable competitiveness, indulgence is related to sustainable competitiveness, and NC is related to sustainable competitiveness. These relationships are illustrated in Figure 1.



**Figure 1.** Research framework.

By rigorously adhering to these methodological procedures, this research not only seeks to unearth statistically significant trends in cultural convergence but also endeavors to ascertain the statistical underpinnings of the cultural determinants that impinge upon sustainable development trajectories within emerging economies.

## 4. Results and Discussion

### 4.1. Results

#### 4.1.1. Descriptive Analysis

This segment offers a comprehensive delineation of the dataset encapsulated within Table 2, elucidating the nuances of cultural dimensions. Subsequently, it transitions seamlessly into an erudite exposition of the dataset contained in Table 3, meticulously unraveling the multifaceted dynamics of sustainable competitiveness.

Based on the statistical data presented in Table 4, power distance’s apparent that the mean values across the six cultural dimensions average at 73.76. There is a high emphasis on power distance (scoring 100), indicating a societal acceptance of hierarchical structures without needing further justification. Economies in these settings view hierarchy as a reflection of inherent inequalities, favor centralization, expect subordinates to comply with directives, and idealize a benevolent autocratic leadership style. Hence, emerging economies demonstrate notable inclinations towards high power distance, aligning with Hofstede’s cultural dimensions, although exceptions are noted in South Africa and Hungary.

Individualism in emerging economies scores 34.24. There is a strong inclination towards collectivism. This manifests in enduring commitments to group affiliations such as

family or extended relationships. Loyalty holds paramount importance, often superseding societal norms, fostering strong inter-group bonds where members assume responsibility for each other. Actions that disrupt this cohesion result in shame, with employment relationships perceived through a moral lens akin to familial ties, influencing hiring and promotion decisions to favor in-group members. Conversely, these countries exhibit significant trends towards reduced individualism, except for observed cases in South Korea, Argentina, and Hungary.

**Table 4.** Descriptive statistics.

Construct	Statistics			
	Range	Minimum	Maximum	Mean
Power distance	54	46	100	73.76
Individualism	66	5	71	34.24
Motivation towards achievement and success	60	28	88	52.62
Uncertainty avoidance	65	30	95	66.90
Long-term orientation	91	5	96	38.05
Indulgence	97	14	97	42.52

Source: Authors' own research (2024).

Motivation towards achievement and success has a score of 52.62. Emerging economies exhibit a “decisive” societal outlook. The ethos revolves around striving for personal excellence and embracing a competitive ethos where success is revered. Achievements serve as benchmarks for workplace recognition and advancement, with conflicts resolved individually, prioritizing winning outcomes. Interestingly, moderate levels of motivation towards achievement and success (>50 percent threshold) are notably present in Poland, Qatar, China, South Africa, Colombia, Argentina, India, Hungary, Morocco, Mexico, and Philippines.

Uncertainty avoidance scores 66.90. Emerging economies display distinctive cultural inclinations characterized by pronounced power differentials, preference for collectivist values, reduced emphasis on traditionally masculine traits, heightened discomfort with ambiguity, and restrained indulgent tendencies. A consistent trend in high uncertainty avoidance emerges as statistically significant, with variations observed in Indonesia, China, South Africa, Vietnam, India, and Malaysia.

Long-term orientation registers at 38.05. Emerging economies demonstrate a normative culture. These societies prioritize the pursuit of absolute truths, exhibit deep respect for traditions, display a limited inclination towards saving for the future, and emphasize achieving immediate results over long-term planning. There is a significant inclination towards short-term orientation observed in Russia, China, South Korea, India, and Taiwan.

Indulgence has a score of 42.52; emerging economies lean towards restraint. Such societies exhibit tendencies towards cynicism and pessimism, placing little emphasis on leisure and controlling desires to align with social norms that discourage indulgence. Notably subdued tendencies towards indulgence are evident in the cultural contexts of Brazil, Chile, South Africa, Colombia, Argentina, Malaysia, and Mexico. This statistical analysis highlights a clear division, with three dimensions showing significant increases and an equal number showing significant decreases.

Henceforth, emerging economies manifest congruences across cultural domains characterized by elevated power distance, motivation towards achievement and success, and a proclivity towards uncertainty avoidance. Also, these economies exhibit concordances in dimensions typified by diminished individualism, a predisposition towards long-term orientation, and restrained indulgence.

Based on Table 3, the sustainability competitiveness metrics of emerging economies exhibited notable fluctuations across the analyzed timeframe. Commencing in 2014, the parameters oscillated between 36.9 and 48.3, signifying a certain degree of variability within the observed range. Subsequent years delineated a nuanced trajectory, with 2015

showcasing a margin between 37.4 and 47.3, followed by a moderate widening in 2016, spanning from 36.5 to 49.2. The subsequent years, 2017 and 2018, witnessed a discernible extension of this spectrum, encompassing values between 37.1 and 53.3. The subsequent annual periods continued this trend, albeit with marginal alterations observed. By 2023, the delineated range had shifted to fall within the bounds of 39.6 and 53.2. These fluctuations underscore the dynamic intricacies inherent within the sustainability competitiveness landscape of emerging economies throughout the examined chronological span.

Based on the findings presented in Table 5, derived from the dataset encapsulated within Table 3, it is evident that Taiwan does not furnish sustainable competitiveness data across all scrutinized years, and Russia is devoid of data for the fiscal year 2022. Consequently, the analysis encompasses 21 emerging economies. Notably, the range of minimum values oscillates between 36.5 and 39.6, while the spectrum of maximum values varies from 47.3 to 55.9. Remarkably, the nadir of minimum values is discerned in the year 2016, registering at 36.5, whereas the pinnacle of maximum values is recorded in 2022, attaining a zenith of 55.9.

**Table 5.** Statistics of global sustainable competitiveness of emerging economies 2014–2023.

Year	Number of Samples	Minimum	Maximum	Mean
2014	21	36.9	48.3	44.105
2015	21	37.4	47.3	43.338
2016	21	36.5	49.2	44.205
2017	21	37.1	53.3	44.929
2018	21	37.1	53.3	45.029
2019	21	38.8	51.9	45.019
2020	21	45	52.9	45.246
2021	21	39.3	53.9	46.481
2022	21	37.6	55.9	42.843
2023	21	39.6	53.2	45.086

Source: Authors’ own research (2024).

#### 4.1.2. Correlation Analysis

This segment elucidates the relationship between Hofstede’s cultural dimensions and sustainable competitiveness derived from the data outlined in Table 2 pertaining to cultural dimensions. Subsequently, it proceeds to expound upon the dataset delineated in Table 3 concerning sustainable competitiveness for the year 2023.

From the test in Table 6, out of 7 hypotheses, hypothesis 7 is the only one accepted and significant. The values are 0.578 (quite strong) with a significance of 0.006 (<0.05). Hence, it can be explained that all six dimensions of culture, including power distance, individualism, motivation towards achievement and success, uncertainty avoidance, long-term orientation, and indulgence, are not related to sustainable competitiveness. However, when they are combined as a culture, there is a significant positive relationship.

**Table 6.** Correlation statistics.

Measure	Value						
	1	2	3	4	5	6	7
Pearson Correlation	−0.288	0.642	0.018	0.320	0.467	0.000	0.578
Sig. (2-tailed)	0.206	0.002	0.939	0.157	0.033	0.999	0.006

Source: Authors’ own research (2024).

#### 4.2. Discussion

Emerging economies typically demonstrate a high level of power distance; however, South Africa and Hungary represent notable deviations from this general pattern. There is a trend towards reduced individualism, though South Korea, Argentina, and Hungary show

exceptions. Many emerging economies demonstrate high motivation towards achievement, particularly evident in countries like Poland, Qatar, China, and South Africa. Uncertainty avoidance tends to be high across these economies, with variations seen in Indonesia, China, and South Africa. They typically adhere to normative cultural norms and often favor short-term orientation, as seen in Russia, China, and India. Overall, emerging economies lean towards restraint and exhibit subdued tendencies towards indulgence.

Regarding the findings presented in Table 5, derived from the dataset in Table 3, it is evident that Taiwan lacks sustainable competitiveness data across all examined years, while Russia has no data for the fiscal year 2022. Therefore, the analysis focuses on 21 emerging economies. The minimum values range from 36.5 to 39.6, and the maximum values range from 47.3 to 55.9. The lowest minimum value was recorded in 2016 at 36.5, and the highest maximum value was observed in 2022 at 55.9.

The research findings emphasize that the six cultural dimensions, exclusively, are insufficient for determining sustainable competitiveness. This contrasts with Tehrani's study in 2021, which proposed that economies within a global context, particularly those with lower levels of masculinity, tend to prioritize quality of life over material wealth. This encouraged companies to invest in socially responsible initiatives for sustainability. The discrepancy can be attributed to the differing methodological approaches: this study focused on sustainable competitiveness, while Tehrani's study in 2021 relied on the sustainable development report to explore the relationship between Hofstede's cultural dimensions.

Also, the current study suggested a parallel trend in the connection between NC and sustainable competitiveness. While individual cultural dimensions did not link to sustainable competitiveness, their combined impact could indeed determine it. This contrasts with the findings of [Sedita et al. \(2022\)](#), which suggested that countries adopted diverse approaches to achieving sustainability performance by integrating Hofstede's six cultural dimensions in various ways. Another inconsistency lies in the results of [Sedita et al. \(2022\)](#), which claimed that individualism, power distance, and long-term orientation were the primary factors influencing sustainability performance. These disparities are anticipated due to the use of Hofstede's cultural dimensions and sustainable competitiveness in this study, while Sedita's study employed Hofstede's cultural dimensions alongside the sustainable development report.

The research outcomes delineate an association between the NC of emerging economies and their sustainable development within the paradigm of sustainable competitiveness. This observation carries implications for three distinct domains:

1. Since the inception of research on emerging economies in 2000s, NC has emerged as a pivotal determinant in the quest for sustainable development within these contexts, attributable to several compelling reasons. Initially, it fosters a profound sense of identity and social cohesion among the populace, thereby stimulating collaborative efforts directed towards sustainable objectives. Second, it serves as a reservoir of traditional knowledge essential for the development of sustainable practices in domains such as agriculture, resource management, and climate adaptation. Third, it advocates for the cultivation of sustainable lifestyles by emphasizing environmental stewardship and reverence for the natural environment. Fourth, it assumes a role as a catalyst for cultural heritage tourism, bolstering local economies while concurrently safeguarding cultural and ecological resources. Lastly, it ignites innovation and creativity by offering diverse perspectives, thus facilitating the generation of sustainable solutions to developmental challenges.
2. Emerging economies, characterized by their low-income status and rapid growth trajectories, perceive economic liberalization as pivotal for progress. In these contexts, the relationship between NC and economic liberalization assumes paramount importance, representing a nuanced and deeply intertwined dynamic. National cultural dynamics exert significant influence over societal perceptions and attitudes towards liberalization efforts. Cultures that esteem attributes like entrepreneurship, innovation, and risk-taking tend to facilitate the acceptance and effective implementation of

liberalization policies, fostering an environment conducive to economic advancement. Moreover, institutional frameworks within emerging economies are often shaped by prevailing cultural norms. When economic liberalization aligns with values such as transparency, accountability, and meritocracy, it garners greater endorsement and efficacy among institutional actors and stakeholders. This symbiotic interaction underscores the crucial role of cultural dynamics in shaping the success and reception of liberalization initiatives within emerging economies. Additionally, the adaptability of NC emerges as a pivotal determinant in the success of economic reforms. Cultures characterized by openness to changes and innovation are better equipped to navigate disruptions inherent in liberalization policies, facilitating smoother transitions and mitigating potential resistance. Furthermore, the cohesive fabric of NC plays a crucial role in addressing challenges and inequalities arising during the liberalization process. Values like cooperation, reciprocity, and collective welfare, inherent in cultural paradigms, alleviate social tensions and ensure a more equitable distribution of the benefits derived from liberalization efforts. Moreover, the intersection of cultural values with sustainability imperatives significantly shapes the design and execution of liberalization policies. Integrating cultural perspectives on sustainability fosters more comprehensive and environmental approaches to economic development, aligning with global trends towards sustainable growth. Additionally, national cultural identities influence perceptions of globalization and external influences. A robust cultural identity empowers emerging economies to engage with global markets autonomously, leveraging unique cultural assets and competencies to navigate the complexities of international trade and investment.

3. Emerging economies, which encompass regions such as Asia, Latin America, Africa, and the Middle East, including transition economies like former Soviet bloc economies and China, have exhibited sustained economic growth up to 2023. Notably, within this cohort, the BRIC—Brazil, Russia, India, and China—stand poised for significant expansion. Brazil and Russia, endowed with abundant natural resources, contrast with India and China, which boast vast populations and robust industrial bases. Integral to driving this economic growth is the role of NC. First, cultures that nurture entrepreneurship and innovation foster an environment conducive to economic expansion. They promote risk-taking and view failure as a milestone to learning, thereby facilitating the establishment of new enterprises and the development of groundbreaking products and services, thus fueling economic growth. Second, cultures that prioritize a strong work ethic and productivity contribute to heightened competitiveness on the global stage. By emphasizing diligence, discipline, and efficiency, these cultures enhance productivity levels, thereby complementing the entrepreneurial ethos and propelling economic growth. Third, cultures characterized by adaptability to changes and innovation adeptly navigate the rapid transformations brought about by globalization and technological advancements. This adaptability facilitates the swift adoption of emerging technologies and market trends, thus driving economic growth. Fourth, cultures that promote social cohesion and stability provide a firm foundation for investment and entrepreneurship. High levels of trust and cooperation mitigate social unrest and political volatility, thereby fostering an environment conducive to sustained economic development. Fifth, cultural factors exert a significant influence on a nation's engagement with the global market and its participation in international trade. Cultures that prize openness, communication, and collaboration are more inclined to embrace globalization and harness international trade opportunities, thereby stimulating economic growth through heightened exports and increased foreign investment.

## 5. Conclusions

Emerging economies consistently demonstrate proclivities towards specific cultural dimensions. This includes a pronounced tendency towards high power distance, a marked

inclination towards collectivism, a decisive societal outlook, distinct cultural proclivities, normative cultural traits, and a proclivity towards restraint. Across various cultural domains, these economies exhibit congruencies characterized by elevated power distance, an impetus towards achievement and success, and a propensity towards uncertainty avoidance. Moreover, they showcase similarities in dimensions marked by reduced individualism, a predisposition towards long-term orientation, and restrained indulgence. Such shared cultural attributes likely exert significant influence on the sustainable competitiveness of them, warranting further scholarly exploration and analysis.

Then, an intrinsic linkage emerges between culture and sustainable development, particularly evident in their link with competitiveness. The amalgamation of six cultural dimensions—specifically power distance, individualism, motivation towards achievement and success, uncertainty avoidance, long-term orientation, and indulgence—reveals a notable association with sustainable development, particularly in terms of enhancing competitiveness. This relation underscores the interplay between cultural norms and values and the overarching objectives of sustainable development, accentuating the imperative for thorough scholarly inquiry and analysis within academic discourse.

This study has offered important insights into emerging economies, but it also emphasizes the need for more comprehensive comparative research that includes both emerging and non-emerging economies. While its research framework has examined the relation between NC and sustainable development, it has illuminated the need for future investigations to delve deeper into the direct influence of NC on sustainable development outcomes. Furthermore, while its methodology proficiently utilized both cross-sectional and panel data, there remains an opportunity for enriched data acquisition through longitudinal studies, particularly concerning Hofstede's cultural dimensions and sustainable competitiveness. Notably, its findings, albeit inconclusive in demonstrating significant relations between Hofstede's cultural dimensions and sustainable competitiveness, prompt further inquiry, particularly through comparative analyses involving non-emerging economies. Ultimately, these avenues for future research are paramount in advancing our understanding of the interplay between NC and sustainable development, thereby facilitating more informed policy interventions and strategic initiatives in diverse economic contexts.

This has implications for policymakers and practitioners. Policymakers need to grasp cultural values and norms to design policies that are culturally sensitive and likely to be embraced by the public. Effective communication strategies aligned with cultural narratives can boost public engagement and compliance with sustainability efforts. Offering economic incentives that resonate with cultural values can promote sustainable practices.

Practitioners should align corporate social responsibility (CSR) activities with local cultural values and community needs to enhance corporate reputation and community relations, fostering sustainable competitiveness. Building cultural competence among management and employees can enhance workplace harmony and productivity, crucial for sustainable success. Training programs that promote understanding and respect for cultural diversity are valuable. Adapting sustainable business practices to fit cultural contexts can enhance their effectiveness. Leveraging cultural assets and knowledge can drive innovation and entrepreneurship. Understanding how culture influences consumer behavior helps businesses tailor products and marketing to encourage sustainable consumption patterns.

Looking forward, exploring the relationship between national culture and sustainable competitiveness, potentially mediated by factors like work–life balance, offers a promising area for future research. Understanding and leveraging cultural values enables organizations and policymakers to create environments promoting well-being, talent retention, innovation, and long-term sustainability.

In today's fast-paced work environment, work–life balance is not just a personal need but a critical element of organizational success. Cultivating a balanced work–life environment enhances employee well-being, productivity, talent attraction, innovation, and fosters a positive organizational culture. This holistic approach not only benefits employees but also enhances the organization's sustainable competitiveness.

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