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How do economic, sociocultural and psychological factors influence South Korea' s sustainable development perceptions and performance, and how can these insights be integrated into effective sustainable policy design and implementation?

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Table of Contents

1. Abstract

This study examines how economic, sociocultural, and psychological factors influence perceptions and performance of sustainable development in South Korea, and how these insights can inform effective policy design and implementation. South Korea is a nation with unique conditions. Their deep rooted confucian values and the period of rapid industrialization during the "Miracle on the Han River" among other factors have created a societal context where economic matters are often prioritized over environmental concerns.

This research explores how the factors affect sustainable development in South Korea, discussing challenges such as economic constraints, shifts in cultural dynamics and changes in demographics. The paper evaluates South Korea's current sustainability performance by a comparison through global indexes (Human Development Index, Sustainable Development Goals and The Social Progress Index), and to Japan and China; South Korea's regional peers.

South Korea is highly advanced in technological innovation, but also faces significant issues such as weak policy enforcement and carbon intensive industries.

The research paper concludes with context-specific policy recommendations tailored to South Korea, such as implementing stricter carbon pricing and financially supporting green development and innovation.

2. Introduction to the paper

In a world facing the issues of climate change, resource depletion and a vanishing wildlife and ecosystems, the concept of sustainable development has emerged as a beacon of hope for our planet's future. Sustainable development is not only crucial, but also attainable. At the intersection of economic growth, environment integrity and societal wellbeing, sustainable

development can achieve a world where humans and nature coexist in harmony (Willsher, 2022). However, to achieve sustainable development, we should consider that countries vary widely in their economic, social, cultural and psychological contexts. These factors significantly influence a country's performances and must be considered when designing and implementing sustainable policies.

This paper addresses the following research question: How do economic, sociocultural and psychological factors shape South Koreans' perceptions of sustainable development, and how can these be effectively integrated into sustainable policy design and implementation?

To answer this, the study explores the economic, sociocultural and psychological factors and policies that shape the current perceptions and behaviours towards sustainability in South Korea; a country with unique conditions when it comes to culture, religion, society and psychological factors. It first explores the key concepts around sustainable development and the factors that influence individual perceptions. It examines how the country’s rapid industrialization along with the pre-existing Confucian values, collectivist culture and education-based society shaped people’s attitudes and willingness to adopt sustainable practices.

Between the 1960s and 1990s, South Korea underwent a rapid economic transformation following the end of the Korean War, a period referred to as “The Miracle on the Han River”. During this period, South Korea transitioned from one of the poorest nations to a global economic leader. This rapid development continues to shape modern perceptions of what is considered sustainable (and) economic progress (Korean Culture Center).

Confucianism plays a central role in shaping societal values, fostering a collectivist mindset that emphasizes hard work, social harmony, respect for authority and hierarchical and social structures (Weiming, 2019). This hierarchy is often associated with material success and status,

further influencing societal attitudes toward development and sustainability. While sustainability awareness is growing, and policies are being effective, economic and material priorities often take precedence, complicating the push for long term environmental solutions (Hyun, 2001).

This rapid economic growth period and the deep rooted cultural values are key examples of economic and cultural factors that shape Korea's unique society. Beyond this, social and psychological factors, such as the shift from collectivism to individualism or behavior biases, are also key elements that affect individual's responses to sustainable behaviours, including environmental , social and economic sustainability.

It then explores South Korea's strengths and weaknesses in sustainable development, examines existing and recent sustainable policies, provides an overview of the current international sustainability indicators and rankings and offers a comparison with regional peers. Finally, the paper concludes with policy recommendations, tailored to South Korea's unique conditions. By looking into the factors affecting sustainable perceptions and behaviour, and the current measures and policies taking place, this research aims to propose policy recommendations that could further enhance South Korea's sustainability efforts.

Relevance of research

South Korea's transformation from being a developing country to a global leader in green technology makes it a unique case study for other nations. Findings could be contrasted with western perspectives on sustainable development, highlighting the cultural differences in environmental awareness and action. This research aims to contribute to the academic and policy literature, by offering a comprehensive approach that integrates economic, sociocultural and

psychological factors to explain sustainability perceptions and behaviors in South Korea. By looking into these factors from a Korean-context specific perspective, this paper aims to offer practical policy recommendations that align with South Korea's unique societal dynamics.

This research is of qualitative methodology, as is it based on a comprehensive literature review, grounded on data from academic journals, Korean-specific policy sources and international organizations. Through this interdisciplinary approach, this research provides an in-depth and context-specific analysis.

The findings will aim to provide strategies for South Korea to integrate sustainability into their technology driven economy, bridging the gap between economic growth and sustainability. As a highly industrialized country with an export driven economy, balancing sustainability and economic growth is crucial. Understanding the social and cultural attitudes towards sustainability can help the government design more effective policies and build public awareness campaigns that focus on long-term environmental responsibility (Leung, 2023) . Exploring economic concerns can also guide incentive based sustainability programs. South Korea's cultural policies are evolving to support economic development and sustainability, looking for a common ground between traditional values and sustainability (Ścibiorska-Kowalczyk & Cichoń, 2021).

The following section discusses the paper's methodology in more detail, followed by a literature review with an introduction to the key concepts surrounding sustainability. The paper's findings and analysis section examines the specific economic, socio-cultural, and psychological factors shaping sustainability perceptions in South Korea, and then analyzes the country's sustainability policies and global positioning in the sustainability landscape. Finally, this paper

provides tailored policy recommendations for South Korea, the limitations to the research, and concluding remarks.

3. Methodology

This research is of qualitative nature, as it looks into existing literature around sustainability and sustainable growth, delving into South Korea. By examining both the South Korean context and exploring other countries' sustainable performances, this study allows for an assessment of South Korea's current positioning in sustainability in the global landscape, the country's potential sustainable growth, and what can be learnt from other frameworks. To base this research off a strong and credible foundation, I conducted the literature review using academic databases such as Google Scholar, JSTOR, ScienceDirect, the OECD library and sources from the UN and World Bank. It also makes use of sustainability indexes, which allow for an objective comparison between countries' performances.

Korean specific sources were prioritized, including government reports, policy papers and Korean journals. When selecting literature, the search was organized by categories; economic, socio-cultural and psychological factors to align with the sections of the paper. Key terms in the search included "Sustainability perceptions in South Korea", "Sustainability", "Economy", "Socio-cultural" and "Cognitive biases" among others.

By combining these data sources, this research aims to provide a deep understanding of the factors affecting sustainability in South Korea, and offer context specific policy recommendations to improve the effectiveness of sustainable development initiatives.

4. Literature review: Key concepts

This section of the paper introduces the key concepts that will be discussed throughout the research. It begins by defining the concepts of sustainability , followed by a comparison between economic growth and sustainable growth. It then provides an overview of the factors that affect a society's efforts and perceptions regarding sustainable development.

Sustainability

Sustainability was first introduced as a concept in policy making in the UN's Brundtland Report of 1987. It is defined as what "meets the needs of the present generations without compromising the ability of future generations to meet their own needs". With the increasing threats of climate change, more specific efforts need to be made to ensure that our current development does not effectively affect future generations (United Nations, 1987) . Over the course of time, the concept of sustainability has been redefined, normally encompassing three dimensions also known as the ESG frameworks; Environmental, Social and Governance[1]. The survival of our societies and our shared planet depends on a more sustainable world, which can only be achieved by balancing economic growth, social inclusion and environmental protection (United Nations, 2024).

[1] The economic aspect is sometimes considered, especially in discussion of the triple bottom line; a sustainability framework for business that revolves around 3P's: People, Planet and Profit, but ESG is usually the dominant framework in sustainability contexts (Kuhlman and Farrington, 2010).

Economic development vs sustainable development

While sustainable development integrates environmental preservation and social well-being into its frameworks, economic development traditionally focuses on material growth and wealth accumulation, often measured by indicators such as the GDP.

Defining sustainable development by using the ESG approach, excluding the economic aspects of sustainability can lead to significant issues, such as obscuring the inherent tension between economic growth and environmental protection, weakening the emphasis on preserving the environment, and separating the social and economic dimensions, which are inherently connected (Kuhlman and Farrington, 2010). By promoting stable economic growth at the same time as the conservation of natural resources, the protection of the environment and social progress and equality, we can conserve and enhance our limited natural resources so that all countries can meet their basic needs of food, energy, water and sanitation (Willsher, 2022).

This paper will be using the definition of sustainable development that includes the economic dimension, to better emphasize the management of resources for future generations. A merged definition of sustainable development that incorporates economic, social, and environmental aspects will help shift away from the materialistic focus on economic growth, encouraging people to view growth as a holistic concept that involves all dimensions, not just one (Willsher, 2022).

Factors affecting sustainable development perceptions

The decision to analyze sustainability perceptions in Korea through the Economic, Sociocultural and Psychological framework is based on interdisciplinary literature that highlights the connection between social norms (Inglehart, 1997), economic structures (Sachs et al.,

OECD), cultural values (Hofstede, 2011; Park & Kim, 2020), and psychological barriers (Markowitz & Shariff, 2012) in shaping environmental attitudes and behavior. These factors offer a context-specific approach for understanding why despite the growing awareness, sustainability remains to be a challenge in many countries, in this case South Korea.

Each country has unique economic, sociocultural, and psychological factors that must be considered when designing policies and implementing sustainability measures, as these factors, along with the effectiveness of the implemented policy, influence both perceptions, overall performance and policy target achievements in sustainable development (Kim & Kim, 2022) . Given this, it is important to first outline the general factors that affect sustainability in societies before delving into the specific case of Korea, which will be explored in greater detail with the use of specific examples in the following section.

These factors are deeply interconnected, and are also connected to the way in which they affect sustainability outcomes. Economic structures influence cultural values, further influencing individual mindsets and preferences. An example that reflects the factor's interconnectedness is how rapid industrial growth influences consumer attitudes, while cultural aspects might determine people's responses to sustainable policies and incentives. Psychological tendencies are also shaped by the sociocultural and economic environments. While this research examines these factors individually for clarity in the analysis, it is essential to acknowledge the dynamic relationships between them, and how this also affects how sustainability is understood and practiced in a country.

Economic factors

A nation's economic conditions are a major determinant of their sustainable performance. Capital growth enhances green attitudes, and thereby decreases pollution. This can be seen both at a governmental and individual level. At a governmental level, wealthier nations have the capital to invest in environmentally friendly infrastructure and innovation such as sustainable transportations, green building and waste management systems, while developing nations often prioritize to focus on more immediate socioeconomic needs, often leading them to use the less sustainable and more affordable options (Strieder Philippssen, Juliana et al., 2017). A similar pattern emerges at an individual level behavior, as a higher socioeconomic status enables people to purchase more sustainable products that come at a higher price, while lower income individuals have to prioritize saving money over being sustainable (Dasgupta et al., 2002).

Socio-cultural factors

The decision to merge "Social and Cultural" factors was grounded on several reasons. Social structures and cultural values are deeply interconnected in practice; both of them shaping and being shaped by the other (Schooler, 1996b). Sustainable development strongly relies on behavioral change, which is rooted on both social behavioral and cultural beliefs (Saracevic & Schlegelmilch, 2021). Many sustainability issues require a combined approach, where social and cultural considerations are taken into account. When combining these, overlapping topics such as education, demographic changes and community cooperation can be simplified. In South Korea's context, the social and cultural dimensions are tightly intertwined; confucian structures, demographics shifts and collectivist values are examples of how the socio-cultural dimensions of a society can influence sustainability behaviours (Bongran Lucia Sun & Woo Gon Kim, 2024).

Social factors refer to the elements that shape human interactions and societal organization, such as demographics, social institutions, and shared norms. Cultural norms are embedded within these structures and influence collective attitudes, expectations, and traditions. It is often difficult to isolate social influences from cultural ones, as institutions like education systems not only organize society but also transmit cultural values across generations (Nickerson, 2024). For example, education influences sustainability by fostering awareness, and this educational content often reflects underlying cultural values.

Social and cultural aspects are both essential for promoting sustainability. Behavioral change requires not only institutional support and peer influence but also alignment with prevailing cultural beliefs. Studies have shown that higher education levels correlate with environmentally conscious behaviors like recycling, conservation, and green consumerism (Strieder Philippssen et al., 2017). Culturally rooted values such as responsibility towards the community or reverence for nature can significantly drive or hinder such behaviors. Demographic changes, such as Korea's aging population highlight the importance of this socio-cultural interplay. Older generations may be less inclined to adopt sustainable behaviors, while younger groups demonstrate greater environmental awareness. This occurrence is tied both to their social environments and evolving cultural attitudes (Komp-Leukkunen & Sarasma, 2023). Culture also plays a transformative role in sustainable development by promoting social cohesion and cooperation and aligning policy initiatives with local values (Russu, 2024). As Rumal Bandara (2024) explains, shared cultural foundations facilitate collective action toward common goals such as poverty alleviation and environmental protection, contributing to a society where everyone can thrive.

Psychological factors

Cognitive biases are systematic errors in thinking which occur when we process and interpret information in our surroundings, influencing our decisions and judgements. (Ruhl, 2023). They can lead to poorer decisions across different situations, even when there are no complexities, uncertainties or time constraints involved (Korteling et al., 2022). Cognitive biases often influence sustainable behavior. Individuals might underestimate long-term climate risks (present bias) and prioritize short term convenience over environmental sustainability (status quo bias). These biases play a role in everyday decisions related to food consumption, energy use and waste management, weakening the effectiveness of existing policies (Zhao and Luo, 2021). This paper looks into three biases that are applicable to South Korea's conditions; Status Quo bias, Present Bias and Conformity Bias. In South Korea, individual choices are shaped by the rapid modernization, collectivist values and digital culture. These social and economic factors often interact with psychological tendencies ,often supposing a constraint or accelerator to sustainable behaviour.

The Status Quo Bias suggests that individuals rather stick with their existing habits rather than trying new options to minimize effort and avoid the uncertainty associated with change. This bias hinders efforts related to the promotion of climate action that require changes in people's current lifestyles even though these changes would be beneficial over the long term (Zhao and Luo, 2021). The present bias refers to our tendency to give priority to those things that are closer in terms of time and space rather than more distant ones (Weber, 2017), which often leads to procrastination when adopting sustainable behaviors. The conformity bias is the

tendency to change one's behaviour and beliefs in order to fit in with the group. Rather than following their own judgements, individuals often follow the groups they are with or belong to when making decisions. This bias can be reflected in the younger Korean society's tendency to follow trends and social norms in order to fit in with society (차유리 and Kwon, 2018). Our tendency to copy others' behaviours and regard them as the norm and justification of undesirable behavior choices can highly influence the achievement of sustainable goals (Korteling et al, 2023).

5. Findings and analysis: sustainability in South Korea

This section first explores the relationship between the economic, socio-cultural and psychological factors and sustainability in South Korea's specific context. The countries' internal dynamics have a direct impact on environmental policy outcomes and path towards a greener development. The paper then evaluates the current global sustainability situation through a comparison of key international indexes, identifying South Korea's standing in the global ranks, and the stronger and weaker performing countries in each index. Building on this, South Korea's current situation will be examined in more detail; with an analysis of their strengths and weaknesses in sustainability, and an overview of their current and recent policies along with their progress. To contextualize these findings, the paper then compares South Korea's positioning with regional peers and similar economies; China and Japan. Finally, this paper aims to present policy recommendations tailored to identified gaps in the existing policies, and better aligned with South Korea's unique economic, socio-cultural, and psychological context.

a. Factors affecting sustainable development in South Korea

Economic factor

Following the devastation of the Korean War, in 1962 South Korea initiated its First Five-Year Economic Development Plan, marking the beginning of an export-oriented industrialization period; a transformative period known as the “Miracle on the Han River”.

The Miracle on the Han river consisted of 6 cumulative economic development plans. These plans focused on multiple sectors, including building (1) fundamental infrastructure and increasing export capacity. Some of the main infrastructure systems include physical infrastructure, such as transportation networks, energy, water and sewage infrastructure. Advancements in industrial infrastructure included factories and export related infrastructure. Social infrastructure was also a main player in this period of rapid transformation, contributing to the improvement of social well-being and productivity. Some of the main sectors developed were education institutions and healthcare centers. Finally, the government invested in financial infrastructure development, with a focus on banks and financing institutions and investment mechanisms. Once the infrastructure groundwork was complete, The Korean government aimed to expand industrialization (2) with a focus on technology and heavy industries (3). Through subsidies and incentives, small scale companies grew into globally known brands, such as the Samsung and Hyundai groups, POSCO or LG, which play a crucial role in Korea's current economy. This resulted in a growing inequality between high populated urban areas such as Seoul and rural regions, for which they set a plan to focus on targeted regions and increase their development and population, aiming to reduce inequality (4). The next focus was developing

technology and upgrading industries (5) through stronger research and development and a shift from quantity to quality in growth, with the objective of achieving greater financial stability. The last plan focused on achieving economic liberalization and globalization (6), while an emphasis on their high tech industry and international positioning in the global market continued. Key aspects of this plan include opening markets, reducing trade buried and ensuring financial stability (CSGEF Research Unit, 2024).

The combination of an outward looking development strategy, having a well-educated and disciplined labor force and the rapid technological innovations are key factors responsible for South Korea's long term growth and success (KARADAŞ & ÇETİN, 2018). While these economic plans laid the groundwork for rapid development and global competitiveness, they also triggered the beginning of several sustainability challenges that persist today. Despite the government's efforts to address the widening economic divide, the economic development plan unintentionally had a reverse effect and increased regional inequalities. Development largely centered around major urban areas, leading to an overconcentration of economic power, while rural areas were mainly excluded from the main industrialization advancement, causing economic disparities (Andrey Smolyakov, 2023). The focus on urban-centered growth led to socioeconomic pressures in the main cities, such as Seoul and Busan, and a lack of economic, educational and employment opportunities in the rural areas, leading to a widening of the income gap between cities and rural regions .

Rural areas are now facing labor market shortages, along with rises in living, housing and education costs, placing significant stress on the people. This results in economic concerns taking precedence over other concerns, often leaving sustainability as a lower priority. While the employment rate in South Korea has traditionally been high, by the end of 2024 the

unemployment rate was highest in three and a half years, reflecting the impact of the labor market instability (Lee, 2025) .

In addition to the high job market stress, South Koreans face cumulative pressures from rising living, education and housing costs. Real estate is seen as a primary money-gaining tool, especially in Seoul, leading to the creation of a regional imbalance that undermines spatial equity, which is a key element for sustainable urban planning. This can exacerbate inequalities and suppose a challenge for sustainable urban planning, which is a tool for sustainability.

Rural areas are also very vulnerable to this development imbalance, which leaves them with labor shortages and population decline, since younger generations migrate to bigger cities for better opportunities, which also builds up the overpopulation in the bigger cities (Lee & Han, 2023).

This urban center growth has resulted in higher levels of inequality for both urban and rural areas, also leading to further social and psychological stressors. In order to advance towards a more sustainable society, the root causes of these issues need to be tackled, but this alone is not sufficient, as sustainability efforts will continue to be a secondary (if not further) priority compared to people's immediate economic concerns.

During the miracle, the government economically financed and supported the growth of big companies such as Samsung, LG, Hyundai and POSCO. This focus on the rapid growth of heavy industries not only resulted in massive energy use, urbanization and environmental degradation in early decades, but also to a concentration of economic power and a reduced space for innovation and diversity (Moore, 2022). This has resulted in current environmental issues including air pollution, energy dependency and waste management issues, supposing barriers for sustainable growth. The Han river strategy not only relied on the fast growth of these big

companies, but also on an export-oriented industrialization, creating a dependence on global supply chains and fossil fuel heavy industries.

Luckily, South Korea is currently rethinking their long term sustainability and resilience in terms of energy transition, green technologies and supply chain localization. (Hong et al., 2019).

Another measure during the Miracle, was the transition to state-led economic planning, which often priorities economic productivity over social wellbeing and sustainability. This approach continues to influence current economic strategies, and despite it has driven significant economic and industrial growth, it has also rooted challenges for balancing productivity with sustainability and social welfare (Suh MoonGi, 2003) .

All of the economic success from the Miracle period led to a normalization of material wealth and consumptions, directly linking these with social status indicators. Individual's positions in the hierarchy and role in society is determined by their economic position, placing a focus on money and material wealth rather than sustainability (Suh MoonGi, 2003).

These issues among others are deeply embedded in South Korea's history and the Miracle period, making it complicated to create change, as these issues are rooted in deeper values and ideals. Sustainability has only recently started to become a national priority, and cultural and policy shifts are starting to happen but need to continue to be developed.

Socio-cultural factors

South Korea has traditionally been a collectivist society rooted in confucian values, where interdependence, group harmony and social cohesion (collectivism) are emphasized.

Collectivism has proven to have a positive correlation with pro-environmental behaviors and higher levels of environmental consciousness, as individuals are more likely to consider the wellbeing of future generations, while individualism tends to result in lower environmental levels (Jung & So Yeon Cho, 2023). These last decades, there has been a shift towards a more individualistic mindset, specially seen in future generations. A rapid increase in single person households, solo activities and a decline in community participation are examples of this shift towards a more individualistic mindset (Korea Times, 2024). Individualistic values often prioritise autonomy, self interest and convenience over collective environmental responsibility. A study by Moon, Lee, and Jeong in 2023, discovered that Korea's increasing individualism is directly related to lower levels of pro-environmental behavior. It also highlights how even in more individualistic societies there is potential for creating strong social cohesion, which could help to mitigate the negative effects of individualism and foster a sense of shared responsibility and therefore could increase sustainable practices (Moon et al., 2023b).

As of December 2024, South Korea became a "super-aged" society (Min-ho, 2024), with 20% of its population being aged 65 or older. South Korea has been facing incredibly low birth rates, which dropped just to 0.72 in 2023, marking the world's lowest score (Seo & Lau, 2024). As a reference point, countries need a fertility rate of 2.1 to maintain a stable population in the absence of migration, which is also low in South Korea's case, due to restrictive immigration policies resulting from the strong opposition towards immigrants from the Korean population (Seo & Lau, 2024). Older populations tend to be more reluctant towards change and innovation, usually being more conservative when making economic decisions, ensuring stability over change. Reluctance towards the adoption of sustainable policies or technologies that require financial investments are examples of this resistance. They are more likely to act on problems (in

this case climate issues) when these are presented as imminent, but will otherwise focus on preserving economic security rather than adopt change (Kim & Kim, 2024). The declining birth rate also largely contributes to the aging of society. Younger generations will have to deal with the burden of climate change. These younger generations, who also have to face multiple economic pressures, hold the older ones responsible for the past unsustainable growth, resulting in an intergenerational conflict on the burden of climate change. This divide leads to conflicting priorities, since older individuals focus on maintaining economic stability while younger generations fight for sustainable action, but also have to focus on their own economic survival. There is no clear agreement on how to plan for the future. Older people seem resistant to change, while younger generations have other priorities to deal with before leading sustainable transformation. (Moon et al., 2023c).

South Korea's education system is intensely focused on academic excellence. This system, also known as "education fever", rooted in Confucian values which emphasize discipline and hierarchical success, has fostered a hyper-competitive environment among students and families, where individuals are constantly obsessed with education and prioritize individual academic achievement above all (Dittrich & Neuhaus, 2023). This focus has contributed to a self-oriented mindset that often undermines the importance of collaborative team working and community action. Such dynamics pose challenges for cultivating sustainability, as the capacity for collective action and community cooperation are diminished due to the importance given to individual achievement and success (Kim, 2017).

Despite raising environmental awareness among South Koreans (Ha et al., 2023), formal education institutions remain underdeveloped compared to other countries' performances. According to the OECD's education for Sustainable Development indicators, South Korea is

behind in the integration of climate literacy, green engagement and ecological systems thinking into its national education systems (OECD, 2024). Sustainability is normally dealt with from a minor focus compared to the central educational priority, affecting the younger generation's understanding of environmental issues and the urgency of taking action.

Although many Koreans may not actively practice Confucianism as a religion, many of its values remain deeply embedded in Korean culture and societal norms (Mitu, 2015). Confucianism emphasizes virtues such as filial piety, respect for hierarchy, education, and moral self-cultivation. It has profoundly influenced societal structures, cultural norms, and individual behaviors in South Korea. These practices promote a collectivist culture where social cohesion and respect for authority are valued. South Korea's confucian roots can be used as a tool for sustainable development, as the emphasis on collective progress enables policies that prioritize long term development rather than short term gains. There is a principle of Harmony (和), central in confucian culture, which emphasizes the importance of balancing economic growth and environmental preservation, and the confucian value of education could encourage participation in public awareness campaigns on sustainability. While confucian values can support some sustainability particles, they can also create challenges for more decentralised or participatory approaches to environmental governance (He et al., 2024).

Psychological factors

Having identified key cognitive biases that can hinder sustainable decision-making in the South Korean context , this section illustrates how the three specific biases (status quo bias, present bias and conformity bias are reflected in the South Korean context examples. In South Korea, The Status Quo bias can be seen through waste management and food decisions. Despite

their awareness about the climate crisis, people continue unsustainable habits such as food consumption and waste management. This reflects how individuals rather stick with their existing habits rather than trying new options to minimize effort and avoid the uncertainty associated with change (Zhao and Luo, 2021).

An example of the present bias, which refers to the tendency to prioritize immediate rewards rather than more distant ones (Weber, 2017), is when individuals are disincentivized to purchase energy-efficient products and services, such as solar panels, electric vehicles, or using sustainable transportation because of the higher costs, despite the equally high or higher future savings that these more sustainable products could have brought (Weber, 2017).

The conformity bias explains the tendency to change one's behaviour or beliefs in order to fit in with the group. This bias can be seen in the Korean society through their tendency to follow trends and social norms in order to fit in with society (차유리 and Kwon, 2018). In South Korea's collectivist culture, individuals often have similar behaviors to the social norms to maintain group harmony and fit into the norms. For example, the popularity of certain clothing brands, such as The North Face among young generations, leads to their widespread adoption. Despite their higher cost, individuals still purchase them to fit into the group and be "socially accepted". This behavior also applies to environmental actions. A study examining pro-environmental behavior in South Korea found that people's willingness to buy environmentally friendly products was more influenced by their perceptions of other behaviours than their personal attitudes or preferences. This reflects how visible sustainable actions by others can encourage one's sustainable behaviours, highlighting how social influence is crucial for environmental sustainability (Schlegelmilch, 2022).

Current sustainability landscape:

This section begins with an overview of the current global sustainability performance. By looking into three key international indexes; HDI, SDGs and SPI, it aims to highlight both the leading and lagging countries in terms of sustainable development by looking at the current positioning of the nations. The focus then shifts to South Korea's current positioning, exploring the current and recent policies, and their strong and lagging points, followed by a comparison to regional peers.

Current global sustainability situation

Indexes are valuable tools for assessing a country's sustainability performance as they integrate complex data into comprehensible, comparable formats. They allow us to compare a country's performances to global standards and tracking progress over time (Booysen, 2002). The analysis of the current global sustainability context will be done through three major indexes; the Human Development Index (HDI) , the Sustainable Development Goals (SDGs) and the Social Progress Index (SPI). These indexes cover the different and essential dimensions of sustainable development.

Figure 1 -> Comparison table of South Korea's performance across main global indexes, showing scores and rankings among top and bottom performers.

Index	Dimensions covered by index	Top country	Bottom country	South Korea's Rank
The Human Development Index (HDI) (World Population Review, 2024)	Societal progress: life expectancy, education and income per capita	Switzerland (0.967)	South Sudan (0.381)	0.929
Sustainable Development Goals (SDGs) (United Nations, 2024a)	Social, economic and environmental	Finland - 86.35	South Sudan - 40.14	77.33 (33rd in the ranking)
The Social Progress Index (SPI) (World Population Review , 2025)	Social and environmental outcomes	Norway – 90.74	South Sudan – 30.65	86.47 (17th country in the ranking)

The United Nations Human Development Index (HDI) assesses overall societal progress by combining life expectancy, education and income per capita. It seeks to quantify a country's prosperity levels based on economic factors, such as the GNI and non-economic factors, such as

life expectancy and educational attainment. This index ranks countries with scores from 0 to 100, having 100 as the highest score, hence the most sustainable development. A high score indicates that the country in question offers a generally high standard of living, with decent healthcare, education, and opportunities to earn money. From the 2023/2024 Human Development Report, Switzerland finished first with an HDI value of 0.967. Norway, Iceland, Hong Kong, and Denmark rounded out the top five. Meanwhile, developing countries such as South Sudan scored low in the ranking, with scores such as 0.381. Korea's HDI score is considerably high (0.929), demonstrating the country's strong progress in the areas covered by this index.

The UN's Sustainable Development Goals (SDGs) Index tracks sustainable progress scores of the 17 United Nations' SDGs, from poverty eradication to climate action. The total score represents a country's progress towards achieving all 17 SDGs (United Nations, 2025b) . Developed countries including Finland, Sweden and Denmark were among the top 2024 leading countries with scores of 85-86 / 100. Developing countries like South Sudan have lower scores (40.14 /100). South Korea ranked 33rd out of 199 countries, with an overall score of 77.3, with strengths in SDGs 4 (Quality Education) and 9 (Industry, Innovation and Infrastructure), and weaknesses in SDGs 13 (Climate Action) , 14 (Life Below Water) and 15 (Life on Land) (Sustainable Development Report, 2024).

The Social Progress Index (SPI): Measures social and environmental outcomes such as health, education, personal rights, and ecosystem sustainability. It considers access to basic human needs including health, shelter, safety and water, foundations of wellbeing, including access to knowledge, information and the environment and country's opportunities, such as personal rights, freedom and inclusion. The 2024 SPI results indicate that the world has entered its first "social progress recession" period, marked by stagnation and decline in global social

progress. It is argued that factors such as restricted access to health, information and communication, diminished rights and suppressed liberties are attributed to the downturn (Social Progress Imperative, 2024). Norway has the highest SPI score among the ranked countries (90.74), while South Sudan scores the lowest, with a score of 30.65. South Korea has a score of 86.47, ranking 17th globally (World Population Review, 2025).

South Korea's current policy and performance situation

This section examines South Korea's current sustainability performance and policies. The assessment will be done through an analysis of the country's key sustainability strengths and weaknesses, followed by an overview of the main current and recent policies.

Strengths

Since the post war economic transformation (Miracle on the Han River), South Korea has been rapidly advancing technologically. The government support for technological advancements laid the groundwork for South Korea's emergence as a global power in technology (Seth, 2017). South Korea is currently a leader in the tech-industry, specialising in semiconductors; holding the second largest global share (17.7% of the global market), robotics; being one of the counties with the top users of industrial robot globally, and "smart manufacturing", referring to smart factory / production technologies, which integrate AI, automation and Internet of things to enhance productivity and sustainability (International Trade Administration, 2023). These advancements are essential for innovation and sustainable development, as they directly impact greenhouse gas emissions. A study by Asif Raihan demi demonstrated that innovation contributes to both, increases and decreases in emissions, depending on how it is implemented (Raihan, 2023).

The country has established a strong research and development infrastructure specialised on green technologies. Some advancements include renewable energy, energy-efficient systems and smart grids. South Korea has been investing in multiple sustainable initiatives such as sustainable city and urban planning programs, design of energy efficient policies, or an efficient recycling system. After the 2020 COVID pandemic, South Korea launched the Green New Deal as part of their recovery strategies, they invested in carbon-neutral industries, green infrastructures and renewable energy, also with the objectives of job creation and economic growth potential. The Digital New Deal complements the Green New Deal by including modern digital technologies to enhance sustainability. This facilitates the development of smart cities, sustainable infrastructure, and innovative solutions for environmental challenges (European Parliament , 2021). In addition to national sustainable policies, South Korea actively participates in international partnerships to promote green growth. Notably, the collaboration with Denmark through the Green Growth Alliance is an example of efforts to share technology and best practices to foster global sustainability.

South Korea has recently been investing in hydrogen technology. The “Hydrogen Economy Roadmap", is a detailed infrastructure plan which aims to lead a hydrogen innovation by developing a “hydrogen ecosystem”, by increasing hydrogen powered vehicles and expanding hydrogen refueling stations all around the nation as a key part of the plan. This hydrogen economy would help South Korea achieve economic growth and industrial competitiveness. South Korea thinks the hydrogen model could increase the economy by 43 trillion won (43$), and create 429.000 new jobs (Green Hydrogen Organisation, 2025).

Weaknesses :

Despite South Korea's great progress in sustainability, they also face several challenges, often caused due to factors specific to the country.

The country's economy is heavily dependent on carbon-intensive manufacturing industries such as petrochemicals, automobiles and steel. Over 60% of South Korea's electricity originates from coal, natural gas and oil. There are existing plans to reach net zero by 1050, but the transition to green energy remains low compared to many western economies. This slower transition is partly due to industrial policies favoring rapid growth over sustainability, limited domestic potential for solar and wind energy due to land constraints and psychological barriers to adopting sustainable habits. While South Korea has introduced strong green policies, their enforcement and alignment to global positions still remains weak. An example of this can be seen through the lack of strict carbon pricing systems, which, compared to the EU's Emissions Trading system, remains weak. In addition to the government's struggles to implement sustainable policies, private sector investments also lag behind public initiatives. For instance, green technology adoption is being adopted but still faces challenges because of lack of findings and policy uncertainty. ESG reporting standards are still under development and not always mandatory (specially for smaller firms). On the other hand, large corporations also often engage in "greenwashing", publishing sustainability efforts which actually don't have a significant impact (Rhee, 2025)

On the environmental side, South Korea faces challenges such as air pollution in the urban areas, which significantly impacts health and raises public concerns. South Korea has one of the highest plastic consumption rates in the world, and although recycling rates are improving, there is a significant issue with food waste management, and they still heavily rely on

incineration and landfill. The high population density and carbon-intensive manufacturing practices in urban areas put pressure on natural habitats, both land and aquatic, leading to a limited biodiversity and struggles in balancing biodiversity conservation and development.

Current and recent policies in South Korea

During the past years, South Korea has emerged as a strong player in global sustainability, dealing with climate change issues through green innovation and policy reforms. South Korea is one of Asia's most technologically advanced and industrial nations, and the balance between maintaining a stable economic growth and incurring a smooth transition towards an environmentally responsible country is essential (Chung & Lee, 2022) .

The 2050 Carbon Neutrality goal is one of South Korea's internationally recognized biggest climate commitments and their primary legal instrument to achieve climate goals. It commits the country to reach carbon neutrality by 2050 by developing a detailed strategy for sustainable development across different sectors including energy, industry and transport, setting a target of reducing emissions by 40% from 2018 levels by 2030. This goal aims to achieve a transition that is just and protects vulnerable communities and implements inclusive governance, involving local governments, industries and the civil society. This goal was enacted in 2021 and effective from 2022, when South Korea implemented regulations in the industrial and energy sectors, reducing greenhouse gas emissions by 3.5% compared to the previous year (The Government of the Republic of Korea, 2020). Despite the advancements and efforts, the implementation faces challenges. The "Climate Action Tracker" ranks South Korea's climate regulations as "Highly Insufficient", with their current measures struggling to be aligned with the Paris Agreement's 1.5°C temperature (Climate Action Tracker, 2023).

The 2020 Korean Green New deal was made as a recovery response to COVID pandemic. It primarily invests in renewable energies, green jobs and digital infrastructure, targeting carbon emissions, green mobility and sustainable cities (Climate Change Laws, 2020). Currently, there has been a noticeable growth of solar, wind and nuclear energy among other advancements, but this approach also lacks clear long-term objectives (Chowdhury, 2021) .

In 2017, South Korea introduced the 3020 Renewable Energy Plan, which aims to increase the country's renewable energy to 20% by 2030, with a focus on shifting from coal to solar and wind energies. Key aspects of this plan include encouraging public participation and involvement and job creation (Goyal, 2024). By 2023, 9.64% of South Korea's energy generation was renewable . This supposed a significant increase compared to previous year, but is still not enough for the 20% target set for 2030. Main methods of renewable energy include solar and wind energies. The country has been expanding its solar capacity, but is facing challenges with wind energy delays because of local opposition (Min Gyo Koo, 2023).

The K-SDGs were developed 3 years after the SDGs (2018) by the South Korean government's Ministry of Environment, based on the UN's SDGs. The K-SDGs also have 17 goals, but with different emphasis, localised indicators and national targets. It focuses on challenges and priorities specific to Korea such as rapid urbanization, high youth unemployment, aging population, low fertility rate or technological innovation. For instance, SDG 7 (Affordable and Clean Energy), was adapted to South Korea's goals of 20% renewable energy by 2030 and carbon neutrañity by 2050 (Tae-hoon, 2019).

South Korea in the global sustainability context

To position South Korea in the global sustainability landscape, the research will be comparing it to two regional peers with similar economies; Japan and China. The comparison

will be conducted using the Low-Carbon Economic Efficiency (LCEE) as an indicator to compare these nations. The decision to take this approach is based on a study by Zhang, Kim, and Tanaka (2023), titled Evaluation and Prediction of Low-Carbon Economic Efficiency in China, Japan and South Korea: Based on DEA and Machine Learning (Niu et al., 2022).

The Low-Carbon Economic Efficiency (LCEE) offers an integrated approach to assess how countries balance economic growth and carbon reduction. Unlike single-indicator methods, LCEE reflects the efficiency of energy and resources usage in a low-carbon context (where today's nations are working towards achieving zero-net emissions), helping to identify the differences in these negation's structural, technological, and political fields.. The authors argue that LCEE is especially useful for comparing countries like China, Japan, and South Korea, all countries with diverse energy profiles and industrial structures (Niu et al., 2022).

According to the study by Zhang, Kim, and Tanaka (2023) , Japan demonstrates superior LCEE, demonstrating the highest overall sustainability performance among the three countries. Under the Paris Agreement, Japan pledged to cut greenhouse emissions by 46% by 2030 (Niu et al., 2022). They have established clear long-term goals and are slowly making progress towards cutting emissions through a use of cleaner energy methods (Climate Action Tracker, 2024). Japan is making great progress towards a greener society, having established clear targets such as achieving carbon neutrality by 2050 (Ministry of Economy, Trade and Industry, 2020). According to the research by Zhang, Kim, and Tanaka (2023), Japan's efficiency will continue to improve slightly in the future, but if they want to achieve their targets on time, Japan needs to speed up renewables and manage public resistance towards the adoption of more sustainable options.

China is the lowest performer in average LCEE among the three countries, and the world's largest carbon emitter (Niu et al., 2022). Under the Paris Agreement, China pledged to peak its carbon emissions by 2030 and then start reducing carbon intensity (emissions per unit of GDP), mainly by increasing the use of non-fossil fuels such as wind, solar and nuclear power (Evans, 2023). By the end of 2024, China had built enough wind and solar capacity, achieving the target 6 years ahead of schedule (L, 2025). Renewables, mainly solar and wind, now form around 56% of China's total installed power capacity, positioning China as a global leader in clean energy (Nova, 2025). However, China's different regions have very different progress levels. While some regions show rapid transitions towards renewable energy investments and have more strict policy implementations, other regions remain unsupervised, leading to an uneven development in the country's technological development and energy use efficiency across regions (Niu et al., 2022).

According to their average LCEE, South Korea ranks second among the three countries, but falls below the "efficiency frontier" , indicating their hidden potential for faster growth if resources were more effectively used (Niu et al., 2022). South Korea's economy, especially in sectors such as manufacturing and petrochemicals, is heavily reliant on intensive energy usage, with fossil fuels dominating the energy mix. Despite Korea's developed technological base, the study proposes that greater integration of cleaner technologies and structural reforms are needed if South Korea wants to increase efficiency and meet their long term goals (Niu et al., 2022).

South Korea can draw takeaways from both peers. Learning from Japan's case, South Korea could work on better aligning industrial policies with long-term energy planning. This could be achieved by focusing investments into technology diffusion across different sectors and

stabilization and organization in the policy environment. Drawing lessons from China's issue with uneven development across their different regions, South Korea should look into how long-scale investments and regional experimentation can lead to targeted improvements. The study argues that clean energy transitions, industrial optimization and structural reforms are necessary for South Korea to reach its potential and elevate their position in the global sustainability landscape (Niu et al., 2022).

6. Policy recommendations

Having examined how the different factors affect sustainable development in South Korea, along with the country's current and recent sustainable policies, this section aims to provide policy recommendations tailored to the country's unique context. It will first provide recommendations addressing the specific economic, sociocultural and psychological factors, followed by proposals aimed to tackle the existing policy gaps and enhance the effectiveness of the existing sustainability initiatives.

Policy recommendations tailored to the Economic factors

To tackle uneven growth in urban and rural areas, which leads to regional inequalities, the South Korean government should support sustainable transitions in rural communities. Through subsidies for renewable energy projects and jobs and green infrastructure, rural areas would have a better chance to develop, which could lead to a more balanced spatial development (Zelenovskaya, 2014).

South Korea's industrial expansion and economic development have primarily benefited large corporations, known as *chaebols*. This has led to an overreliance on and domination by these companies, which produce large amounts of emissions and limit innovation. To increase opportunities for other green companies to grow, the South Korean government should offer financial and educational incentives to smaller businesses to invest in circular business models and green energy. This approach would not only reduce the dependence on chaebols and promote green parties among businesses, but could also be a source of job creation, which would alleviate the high levels of stress caused by the South Korean job market. (D'Ambrogio, 2021).

Promoting sustainable initiatives by subsidizing smaller green companies can also help accelerate the shift towards use of renewable energy sources. However, to achieve their Carbon Neutrality Goal by 2050, South Korea should implement a strict carbon tax while funding green energy alternatives (D'Ambrogio, 2021).

Policy recommendations tailored to the Sociocultural factors

South Korea's sustainability performance is strongly influenced by the country's socio-cultural factors, such as collectivism and individualism, the aging population, and resistance to decentralized governance. Considering these factors when designing effective sustainable policies is crucial, as these can be determining for sustainable outcomes. If considered they can help with policy implementation and effectiveness, and the opposite can happen if ignored.

South Korea's cultural shift from a collectivist to an individual society directly affects environmental behaviors and levels of environmental consciousness (Jung & So Yeon Cho,

2023). This transition is causing the weakening of the collective motivation for shared climate responsibility. Despite more individualistic values emerging, South Korean modern values remain rooted in confucianism (Mitu, 2015). Using this as a tool to promote sustainable behavior will contribute to building more pro-sustainable behaviours. An example of how this can be done is through reframing the concepts of Status and Identity, promoting sustainability options in a way that they are associated with status, modernity and success. Linking sustainable action with confucian values, such as the protection of nature to honor the ancestors and descendants can lead the society to associate sustainability with moral values and long term responsibilities (unesco, 2023).

To approach South Korea's ageing population issue and intergenerational conflict, intergenerational public programs should be designed, aiming to connect the younger and older generation around the topic of sustainable efforts. Such programs include climate mentorships. Urban farming information sessions or cooperative learning hubs (Froimovici, 2023).

Lastly, South Korea's education system often drives "education fever", fostering a hypercompetitive environment among students, where the only priority is academic achievement, driving individual achievements over collaboration, leaving no space for sustainable values (Dittrich & Neuhaus, 2023). In addition, South Korea's sustainability education is severely underdeveloped, with gaps in climate literature and sustainability or ecological reflections in the schooling systems. To combat this, sustainability education food be made mandatory from early levels. Universities should then reward environmental engagement and experience with volunteer work when evaluating application (Anon, 2022).

Policy recommendations tailored to the psychological factors

The Status Quo bias leads individuals to choose their existing habits over new alternatives even when aware of environmental issues (Zhao and Luo, 2021). To mitigate this, sustainable choices should be implemented as the default option in public services. For example, household utility plans should be based on sustainable options by default with the option to opt-out could significantly increase the adoption of sustainable options (Moran, 2019). Another approach to combating the Status Quo Bias is to design easy to use and understand sustainable options, such as by adding clear instructions in recycling and waste separation systems, which can promote proper waste separation (OECD, 2024a).

The Present Bias leads individuals to prioritize immediate rewards over longer term ones, delaying investments in energy-efficient products (Weber, 2017). Immediate financial incentives when purchasing sustainable options such as energy-efficient appliances or vehicles would combat the Present Bias, as it would reduce the initial cost barrier (Palmer et al., 2025). Secondly, education and information on the long term cost savings and benefits of sustainable choices would also create a sense of reward in the short term, reducing the effect of the Present Bias and promoting sustainable options (Weber, 2006).

Lastly, the Conformity Bias, which is reflected through South Korea's collectivist culture and individual's tendency to align their behaviours with the group's, can be a powerful tool to promote sustainability if used wisely. To harness these tendencies, sustainable behaviours should be publicized and promoted among social media. By collaborating with trending influencers or community leaders, sustainable behaviours can be seen as a new social norm, enhancing individual's appeal and acceptance towards them (OECD, 2025).

Policies tailored to Gaps in the South Korean Government's sustainable policies

Despite South Korea's progress with sustainable policies, significant gaps remain. Better alignment among existing policies would strengthen their impact and increase effectiveness in the longer term . For example, the 2020 Korean Green New Deal, which targets carbon emissions, green mobility and sustainable cities (Climate Change Laws, 2020), could be stronger if better aligned with other frameworks, such as the 2050 Carbon Neutrality Goal (D'Ambrogio, 2021). Aligning these policies would not only enhance efficiency, coordination and speed, but would also accelerate progress towards achieving the 2050 Carbon Neutrality goal on time.

Large companies known as "chaebols" are often the country's main polluters. Their environmental and social impacts are not always visible, as these often spread greenwashing and lack transparency. To address this, ESG (Environmental, Social and Governance) reporting should be made mandatory for all companies, regardless of size. The ESG reporting system is currently voluntary in South Korea, but there is a growing trend towards mandatory reporting. The Financial Services Commission (FSC) emphasizes that it should be introduced gradually, beginning with larger companies and gradually increasing the penalties for non-compliance (Latham & Watkins, 2023). To ensure compliance and effectiveness, a regulatory agency should be established to promote transparency and provide an objective perspective for assessing sustainability performance levels (ESMA, 2019).

Finally, South Korea's strong top-down authority culture, with a centralised government decision making system may hinder participatory environmental policy-making. Civic engagement campaigns would encourage bottom-up participation methods, by promoting local

sustainability conferences and providing budgeting for green projects and innovation (Zelenovskaya, 2014).

7. General limitations

While this research provides an in-depth analysis of the economic, sociocultural and psychological factors affecting sustainability in South Korea, some limitations should be acknowledged.

Integrating economic, sociocultural and psychological dynamics involves the generalization of the terms across each field, which can lead to an oversimplification of these complex interdependencies. An example of this oversimplification can be seen through the categorization of certain factors, for example categorizing social and cultural factors, can involve subjective interpretations due to the overlapping nature of these terms in the South Korean context.

Many of South Korea's dynamics are in rapid and constant change. For example, shifts in demographics, technological developments and policy frameworks are constantly being developed, meaning that some findings may become outdated as new trends emerge.

Next, the factors explored in this paper, especially cultural and psychological interpretations, are context specific. Despite efforts made to ground the literature on Korean-specific sources, the explanation of the key terms is mainly drawn from western frameworks, which presents the inherent limitation of assuming that these theories are equal in the South Korean context. The paper might also come across cultural nuances. Cultural aspects,

such as Confucianism may vary across generations, cities and industries. This research does not explore deeply the differences among these groups, highlighting the need for future research.

The research is mainly based on secondary data from academic journals, government reports and international organizations. This offers a broad overview and credibility, but lacks primary empirical research methods such as interviews, surveys or observations. This can lead to a lack of a first-hand perspective that could be achieved through the direct data collection options. The analysis of current policy implementations cannot fully assess the policy's long term effectiveness, as many of these policies have been recently adopted and are still under implementation.

Finally, this paper's policy recommendations are limited to South Korea's specific conditions, and might not be directly applicable to other scenarios. Instead of offering universally applicable solutions, they aim to serve as a foundation for future research.

Despite the limitations, this research aims to contribute valuable insights for researchers and policymakers, aiming to promote sustainable development in context specific ones.

8. Conclusion

This paper explores the role of economic, sociocultural and psychological factors shaping sustainable development perceptions and performance in South Korea, offering customized policy recommendations to address South Korea's dynamics. As explored, South Korea's unique context and evolving societal norms present both challenges and opportunities for sustainable development.

The study reveals how economic priorities often overpower environmental concerns, leading to a reliance on carbon intensive industries and materialistic consumerism hindering progress. Sociocultural changes, such as an ageing population or shift from collective values to individualistic ones also influence the achievement of collective environmental responsibility. Psychological barriers, including the biases explored in the paper can delay sustainable behaviors, but can also be used as powerful tools to promote green choices.

Despite the challenges that might arise with these factors, South Korea demonstrated strengths in green infrastructures and technological innovations, as we can see through their performance in the HDI, SDG and SPI indexes. On the other hand, there are existing gaps in policy enforcement and alignment and issues with companies greenwashing and lack of transparency, highlighting areas for improvement.

This paper proposed policy recommendations grounded in South Korea's unique societal dynamics. To tackle the economic dynamics that might be hindering sustainable behaviours, this research proposes to implement stricter carbon prices and support rural sustainable initiatives and smaller companies by subsidizing the use of green options. On the sociocultural level, this paper advocates for a reframing of the concept of sustainability as a symbol of status though confucianism values, the promotion of programs that promote intergenerational cooperation for collective sustainability and the integration of sustainability learning into education from early ages. To tackle the psychological factors, public options should be sustainable by default, and promoting sustainable behaviours through social media or influencer people can encourage more sustainable decision-making among individuals. To target gaps in the existing sustainable policies, the government should align different policies that cover the same areas to place a

bigger emphasis on these. Mandatory ESG systems are slowly being introduced, but are key tools when managing companies emissions and sustainable performance.

This research also poses several limitations, including reliance on secondary data, and South Korea's rapidly evolving society. These limitations highlight the need to use primary research and adaptive policy making for future research.

In conclusion, South Korea's transition towards sustainable development requires a comprehensive approach where economic growth is balanced with the environment and societal wellbeing. If South Korea addresses the identified barriers and makes use of its technological and cultural strengths, they can emerge as a global leader in the sustainable innovation landscape.

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