포스트 코로나 시대의 산업경쟁력 강화를 위한 정책방안 연구

2023년 5월

산업통상자원부
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Ⅰ. 국외 훈련 개요

1. 훈련국 : 영국

2. 훈련기관명 : 요크대학교 (University of York)

3. 훈련분야 : 공공행정

4. 훈련기간 : 2021. 8. 30 ~ 2023. 6. 29

Ⅱ. 훈련기관 개요

1. 훈련기관 : University of York

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- 전화번호 : +44(0) 1904 320 000
- 인터넷웹주소 : https://www.york.ac.uk/

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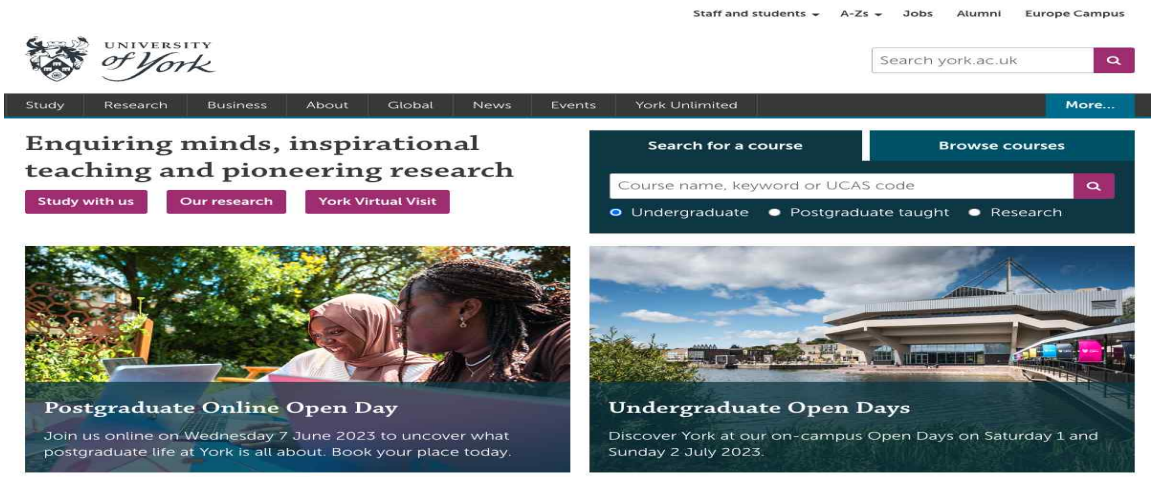

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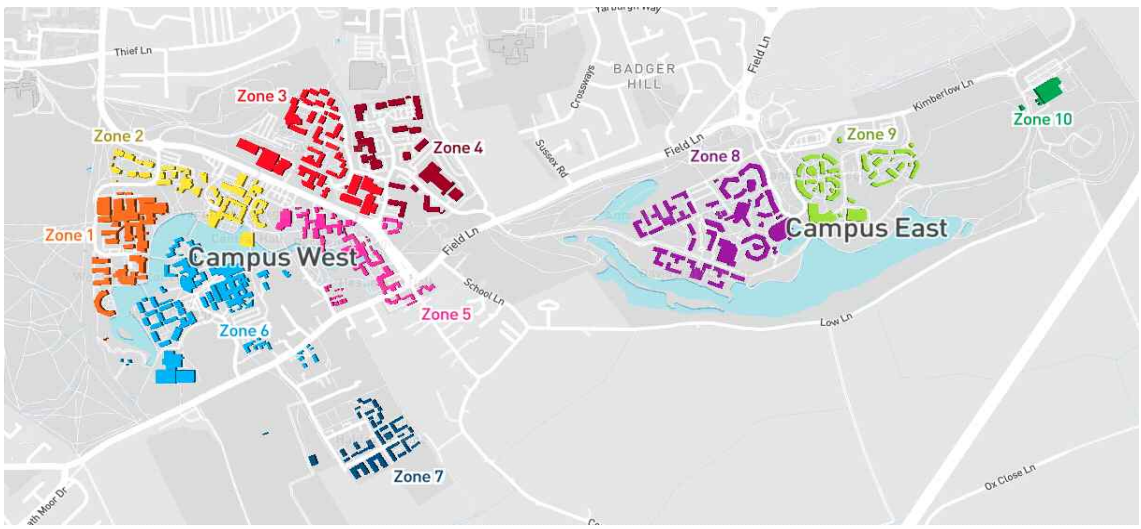

2. 조직 및 구성

○ 10개의 College, 30여 개의 School 및 Departments로 구성

- College : Derwent, Langwith, Alcuin, Vanbrugh, Goodricke, Wentworth, James, Halifax, Constantine, Anne Lister

- School 및 Departments : 사회과학·정치학대학원(School of Social and Political Sciences), 사회정책·사회복지학과(Department of Social Policy and Social Work), 건강과학과(Department of Health Sciences), 요크 의학대학원(Hull York Medical School) 등

○ 주요연구분야

- (응용사회과학) 복지 국가・이슈에 대한 다학제 연구
- (공공정책・행정) 공공서비스와 NGO 종사자의 전략적 기여를 위한 기술과 역량 계발
- (사회정책) 복지국가 달성을 위한 사회과학적 고찰과 비판적 관점의 평가

3. 과정

○ 과정명 : Master of Public Administration with Professional Placement (PAPP)

○ 과정개요

- 요크대 행정학 석사과정은 정부 및 비영리 기관에서 국제 서비스 제공에 대한 지식을 축적할 수 있도록 마련된 과정으로 행정학에 관한 전문적인 공부할 수 있는 기회 제공

- 학위 과정 수강 과목

구 분	수 강 과 목	학점수
1학기 (가을학기)	- Theories of the Policy Process - Optional Module(2과목 선택) * Challenges to policy-making in Democratising countries, Comparative institutions and Public Policy 등 7과목 중 선택	60
2학기 (봄학기)	- Strategic Planing - Managing Public Finance - Public Management and Delivery	60
3학기 (여름학기)	- Policy Report Research Workshop - Policy Report	60

4. 연혁

○ 1963년 요크시민재단 공동창설자인 Oliver Sheldon에 의해 설립. 학부생 216명, 대학원생 14명 및 교직원 28명으로 개교. 설립 당시 경제학, 교육학, 영문학, 역사학, 수학, 정치학 등 6개 학부

○ 1990년대에 급성장하여 학생 수는 8,500명으로 증가, 2000년도에 들어서면서 IT 기술을 바탕으로 가상 학습 환경 구축 및 대학행정의 전산화 기반 확대 등 교육행정 인프라 구축

○ 2012년 기준 Alcuin, Derwent, New Goodricke, James, Langwith, Derwent, Vanbrugh, Wentworth, Halifax 등 9개 대학으로 구성, 30개 이상의 학과 개설

○ 2012년 3월 영국의 아이비리그라 불리는 연구 중심 대학 협의체인 '러셀 그룹(Russel Group)'의 일원으로 새로 추가

○ 2021년 타임즈 고등교육 세계 대학 랭킹 133위, 예술·인문 분야 세계 45위, 사회과학 분야 세계 100위, 생명과학 분야 175위

Ⅲ. 훈련결과보고서

Measures to strengthen industrial competitiveness
in the Post COVID-19
(Focusing on UK and Korea policy cases)

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Measures to strengthen industrial competitiveness
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(Focusing on UK and Korea policy cases)

Abstract

The New Public Management (NPM), which has spread since 1900, has changed the role of the government to market-oriented through privatisation and deregulation along with the efficiency of the government. The South Korean government actively accepted the NPM to effectively overcome the financial crisis in 1997 and promoted the improvement of government efficiency. Accordingly, the formation of a market-oriented industrial structure to strengthen competitiveness accelerated in the industrial field.

Amid this change, Covid-19, which is still in progress, causes changes in government functions and roles. In the Covid-19 situation, which caused lockdowns around the world and changes in life, the role of the government in maintaining and recovering industrial competitiveness has become more important than anything else, along with effective quarantine system operation and cooperation between countries. For example, carbon neutrality has become a new goal for climate change response due to increased interest in health and the environment and digitalisation, which has rapidly increased in accelerating non-face-to-face life such as remote work, has become an important task. The Korean

government is announcing and promoting various policies such as climate change response and digitalisation (digital transformation) to pre-emptively respond to the post-COVID-19. How has the role of government changed? and What is important to implement these policies effectively?

A review of the support policy and climate change response policy announced in the UK's COVID-19 response process shows that it is necessary to continue to present directions and expand business and consumer options. And through Kingdon's multiple stream approach, the process of forming the Korean government's climate change response and digitalisation policy was analysed. Through this, it was confirmed that the role of the government was expanded as the expansion of public finances and system improvement were actively promoted according to the situation of COVID-19. However, despite the government's role being expanded, considering the environment that has changed from the past, it is important to strengthen governance with stakeholders such as companies, citizens, and governments to respond effectively to changes brought by COVID-19.

1. Introduction

The government has promoted continuous change and innovation according to the needs of citizens and the times (Jung et al., 2020). The progress of democratisation has accelerated the growth of civil society. As the participation of citizens, who are the victims of government policies, expanded in all public areas, the central government's authority, such as market monitoring, was transferred to civil society, and citizens' policy participation was raised (Kim, 2007). In addition, globalisation impacted a wide variety of fields, including the economy, politics, and culture. In particular, economic globalisation strengthened multilateral consultation, coordination, and cooperation globally due to increased trade and investment. On the other hand, the side effects of economic globalisation brought about by the financial crisis also led to a phenomenon in which neoliberalism was shrinking. As such, discussions on the role of the market, government, and governance continued in the process of democratisation and capitalist development (Lee, 1998). In addition, along with the progress of globalisation and information technology, global conflicts and crises are accelerating environmental changes surrounding the role of government (Lee, 2017).

The theory closely related to the change in the role of the Korean government reviewed in this report is the New Public Management (NPM). The NPM led to the change in the role and function of the government over the past 20 to 30 years, and since 1980, the NPM has established theories and foundations worldwide (Jang 2004). Introduced by Hood (1991), the NPM is designed to academically discuss changes in the organisation and management of the government. The United Kingdom (UK) has played a central role in the development of the NPM paradigm. In the case of the UK, the

main focus of changes in public management from the late 19th century was to introduce market principles to improve the inefficiency of the public sector according to the welfare state orientation, and NPM was embodied through this discussion (Jang, 2004). The main direction is to innovate the government bureaucracy to be more efficient and better responsive to the needs of the citizen by applying market principles and private sector management techniques to the government's operating system. To this end, the government's operation was streamlined by entrepreneurial management and the improvement of performance indicators. In addition, through privatisation and regulatory reform, the private sector has replaced public services on the part of the government.

The New Public Management theory aims for a practical small government in the expansion of neoliberalism (Kim 2007). This innovation in government organisations has also significantly impacted the industrial sector. In particular, privatisation and deregulation have contributed to creating an autonomous competitive environment through the market (Kuipers et al., 2014). Privatisation is a means of expanding the area and scope of the market, while deregulation has encouraged competition within the market. Such innovation in small governments attempted to promote development through autonomy and competition in the industrial sector (Kim, 1995). In order to overcome the IMF economic crisis in the 1990s, Korea actively accepted new public management and promoted government reform (Im, 2010). The government-led industrial sector was privatised, and the transition to a market-led industrial structure was accelerated through drastic deregulation.

In this report, using Kingdon's Multiple Streams Approach (MSA),

I analyse the situation of the policies announced by the Korean government and examine the changes in the government's role. Government policy is an important role of government, and the role of government can be seen through the contents of the policy (Anon, 2012). The policy instrument used to achieve the purpose of the policy corresponds to the function of the government. These policy instruments include direct policy instruments, including government consumption and economic regulation, and indirect policy instruments, including social regulations and contracts (Salamon, 2002). Government policies that reflect these instruments are gradual, sometimes radical. According to Simon's (1957) limited rationality principle, policymakers determine satisfactory considerations among limited alternatives due to limitations of environmental factors in the decision-making process, such as cognitive limitations. On the other hand, Kingdon's (1984) MSA saw three flows, including policy issues, politics, and policy alternatives, as factors causing significant policy changes (Cairney, 2016). The flow of policy problems refers to serious events in which policymakers recognise problems. The flow of politics relates to changes in political situations due to changes in administration and people's opinions. In addition, the flow of policy alternatives refers to the process in which policy participants present and adjust alternatives when problems are raised. In other words, there may be changes in policies caused by changes in the environment rather than continuity with past policies.

In the unprecedented COVID-19 situation, every country has pushed for an infectious disease response to overcome their respective national crises. In addition, policies were announced to overcome the economic crisis due to the economic downturn and the increase in the unemployment rate. The global crisis caused by

COVID-19 highlighted the state's role, that is, the government, and raised challenges for the future. Along with the global shutdown, the importance and influence of the government's leading and strategic leadership and social conflict and the government's efficient policy implementation were strongly felt amid the suspension of domestic industry and living environment (Park, 2020). In a cover story titled "The Triumph of Big Government" in November 2021, *The Economist*, a British weekly magazine, noted that governments around the world spent $17 trillion to overcome COVID-19, 16% of global GDP. The role of the government expands when the government has a wide range of participation or intervention in the private sector and has the power to actively and effectively solve social problems (Fukuyama, 2004). As such, the influence and role of the government have increased due to COVID-19.

Above all, the COVID-19 situation emphasised the role of the government's response and monitoring of infectious diseases and highlighted the health and hygiene field (Park, 2020). In addition, COVID-19 has resulted in the government's role being emphasised in the industrial sector, which has grown to be market-oriented amid globalisation and the spread of neoliberalism. Due to the global shutdown, the importance of reorganising the global supply chain and fostering high-tech industries such as semiconductors has been highlighted. In addition, it has been confirmed that global greenhouse gas emissions were reduced by 4.02% in 2020 due to the global economic suspension due to the increase in environmental interest caused by COVID-19 and the shutdown (Tan et al., 2021). In addition, as Nadella (2020) has stated, two years of digital transformation took place in two months, COVID-19 accelerated digital transformation as remote work became familiar during the

shutdown. As a task to strengthen future industrial competitiveness, expectations for the government's role in responding to carbon neutrality and digital transformation increased. Korea announced the government's direction to promote digital transformation by promoting bold greenhouse gas reduction through the Korean version of the New Deal, carbon neutrality promotion strategy, and digital transformation policy. In the midst of these changes brought about by COVID-19, how should the role and function of the government change to strengthen future industrial competitiveness? However, unlike the government-led bureaucratic society in the past, the current government policy environment has changed a lot. Due to democratisation, civil society grew rapidly, and companies became key players in the capitalist market economy system. Even if the role of the government has been expanded due to COVID-19, the environment that has changed from the past should be considered.

In this report, based on the case of UK and Korea, I find out how COVID-19 has changed the role of the government. In addition, I review and examine what is necessary to effectively implement the Korean government's significant policies, such as carbon neutrality and digital transformation, especially in the industrial sector. To this end, I first review theoretical parts such as the New Public Management (NPM) theory and Kingdon's Multiple Streams Approach (MSA). Second, I look into the UK government's policy announced due to COVID-19. Third, based on the Korean case, I examine the changes in government function and industrial policy according to the application of new public management. In addition, the Korean government's policy environment announced in the COVID-19 situation is reviewed through Kingdon's MSA, and the change in the role of the government is confirmed. Fourth, I

evaluate the NPM theory applied to Korea and UK policy case, and review what is necessary to effectively respond to changes in Korean policy due to COVID-19, such as the governance consolidation. Finally, I look at the implications for promoting carbon neutrality and digital transformation, which are important in strengthening future industrial competitiveness.

2. Literature review

Changes in the role of the government may be directly promoted by reforming the public sector based on theory but may occur in establishing and changing policies in certain situations. Based on the Korean case, I look at the public sector reform implemented by the Korean government and the changes in the role of the government through the formation and changes of climate change response and digital transformation policies caused by COVID-19. Let's look at Kingdon's MSA to be applied to the analysis of government policy changes along with the New Public Management Theory, a theory that has greatly influenced the Korean government's public sector reform since 1997.

1) New Public Management (NPM) Theory

Since the 1980s, the NPM paradigm has established a foundation for theory and practice worldwide and is used as a broad term for the movement for public management reform. NPM reforms have been launched in Anglo-Saxon countries such as the United Kingdom, the United States, New Zealand, and Australia and have spread to many countries, including continental Europe, Africa, and developing countries (Jang, 2004).

The background of the NPM is the financial crisis caused by excessive welfare expenditures in Western European countries in the late 1970s. Through the Great Depression, the government's fiscal expenditure on welfare increased significantly, facing an economic crisis in the 1970s through oil shocks. The resulting decrease in tax revenue caused the public sector's fiscal deficit. To

solve this problem, the bureaucracy, which is operated inefficiently, was reformed and promoted (Oh et al., 2014). The theoretical backgrounds of the NPM include neoclassical economics, which emphasises market efficiency, and new institutional economics, which emphasises rational choices for pursuing individual interests (Oh, 2014). The public sector also saw that applying market principles maximises efficiency and performance, especially by reducing government authority through deregulation and improving the inefficiency of the bureaucracy through competition, saving, and reduction management. In particular, the UK has played a central role in the development of the NPM paradigm (Jang, 2004). The term NPM was first used in a paper containing the British experience by Professor Hood in 1991. (Hood, 1991)

< Table1. Components of new public management (Hood, 1991) >

No	Doctrine	Typical justification
1	'Hands-on professional management' in the public sector	Accountability requires clear assignment of responsibility for action, not diffusion of power
2	Explicit standards and measures of performance	Accountability requires clear statement of goals; efficiency requires 'hard look' at objectives
3	Greater emphasis on output controls	Need to stress results rather than procedures
4	Shift to disaggregation of units in the public sector	Need to create 'manageable' unit, separate provision and production interest, gain efficiency advantages of use of contract or franchise arrangements in side as well as outside the public sector
5	Shift to greater competition in public sector	Rivalry as the key to lower cost and better standards

6	Stress on private-sector styles of management practice	Need to use 'proven' private sector management tools in th public sector
7	Stress on greater discipline and parsimony in resource use	Need to check resource demands of public sector and 'do more with less'

NPM is said to be a principle that systematised policy measures introduced by governments since the 1980s to solve inefficient public sector problems (Oh et al., 2014). In particular, in order to actively apply private management techniques to the public sector and induce competition, policy tools such as privatisation and contracts were actively used. The main principles of public sector reform based on NPM have been discussed in various ways. First of all, Hood (1991), who used the term NPM, saw that the expansion of NPM was related to other administrative megatrends such as the conversion to small governments and privatisation of government institutions and embodied the new public management theory in seven principles. The seven principles suggested entrepreneurial management in the public sector, clear standards and performance indicators, output control, decentralisation, competition in providing public services, emphasis on management techniques in the private sector, and discipline and moderation in resource allocation (Hood, 1991). In addition, Osborne & Gabler (1992) of the United States presents ten principles as the main principles of NPM to achieve entrepreneurial government. They are the catalytic government, the community-owned government, the competitive government, the mission-driven government, the results-oriented government, the customer-led government, the government-oriented government, and the proactive government Government. In addition,

Kettl (2000) and Turner (2002) suggested marketisation, decentralisation, and the increase of private management tools as the main principles of the new public management theory. Based on these various discussions, Oh Young-Min (2014) viewed the principle of NPM as contrasting with the characteristics of the traditional bureaucracy and summarised the main principles into saving and reduction management, result and performance, competition and privatisation, autonomy, and transparency.

Looking at this, there are two aspects for the direction of small government and the efficiency of government organizations (Oh, 2014). First, internally, it operates a manpower reduction and budget reduction system and converts the management method centred on input and procedures to a result-based management method based on performance and gives autonomy to increase accountability. The other is to induce competition through private consignment or privatisation to improve inefficiency caused by the monopoly of public services, abolish and simplify unreasonable regulations or procedures to promote competition and participation in the private sector and ease excessive regulations that burden the private sector.

In the NPM that led the reform of the public sector, privatisation and deregulation are meaningful in terms of the recovery of market functions, that is, autonomous competition functions, and directly impact changes in the industrial structure. Privatisation is a quantitative means of expanding the scope and area of the market, while deregulation is a qualitative means of boosting competition within the market (Kim, 1995). Privatisation is a means of expanding the range of government control, and deregulation is a means of enhancing competition within the market. It has an autonomous nature of reducing government intervention and

accepting private demands through deregulation and privatisation, reducing the government and political burden as it can be passed on to the private sector for responsibility. As such, deregulation and privatisation have become a reasonable direction of government innovation that enables discrimination against the past, public support, and political burden to be minimised by actively utilising market functions. Privatisation of public enterprises means allowing private enterprises to supply government-produced goods and services to their people so that private enterprises can produce public goods and services (Pheko, 2013). This privatisation is one of the issues that cause fierce political, economic and social confrontation (Koo, 2012). In addition, despite the similarity of the socio-economic background in which privatisation emerged, the world view of the new free forces promoting privatisation and the policy goals pursued by privatisation was privatisation essentially the same privatisation; privatisation proceeded with different trajectories (Hauschild, 2004). Also, basically, government regulations should be those that protect property rights and free competition that have to do with the revitalisation of the market. However, regulations under the government's excessive authority can distort the market process and prevent the efficient use of resources. In this way, deregulation has become an essential means of government innovation in order to grow the economy and increase national competitiveness by efficient use of resources and promoting entrepreneurship (An, 2014).

2) Governance

The change in the pursuit of small government and efficiency based on the theory of new public management is linked to the

establishment of governance (Kwon, 2007). Governance has various definitions, but it can be said that it generally means that various actors such as non-governmental organizations, companies, and the government establish networks of public interest to solve problems, breaking away from past unilateral government-led trends (Oh, 2006). In other words, the new public management theory expanded the public sector's reform and the participation of new stakeholders, and governance through networks based on trust became important (Kwon, 2007). There are clear benefits to NPM, which aims to implement a small and efficient government, which_has provided an opportunity and direction to recognise the need for new government innovation and seek change efforts. However, various limitations are still pointed out in the complete application of NPM to the public sector and the administrative approach, which advocates an entrepreneurial government that focuses on the spread of free-market competition logic (Lee, 2000).

As a result, stakeholder participation and collaboration, that is governance, are important. Governance has been formed through a network based on the trust of the government, companies, and civil society, along with New Public Management discussions that emphasize small governments and efficiency (Stoker, 2019). However, even in a situation where the role of the government has expanded, it can play an important role in effective policy implementation. The essence of governance lies in the reorganization of actors and new identities to express the interdependence and solidarity of various social actors. By consolidating governance, power and resources are distributed, so what is intended can be achieved through cooperation with the other party (Yoo and So, 2005). However, because participants are autonomous, they may weaken reforms rooted in challenges and competition to dominance

(Rhodes, 1996). In other words, despite the expanded role of government spending in effective climate change response and digital transformation, it is important to establish government-business-citizen-international community governance, and the government needs to form and implement policies through governance.

Representatively, NPM aims to revitalise competition in the public sector and enhance economic efficiency through the introduction of a free-market competition system. However, some argue that privatisation, a means of NPM, cannot induce a sufficient market competitive environment, pointing to price hikes and cost transfers caused by the privatisation of public goods such as electricity and telecommunications.

3) Kingdon's Multiple Streams Approach (MSA)

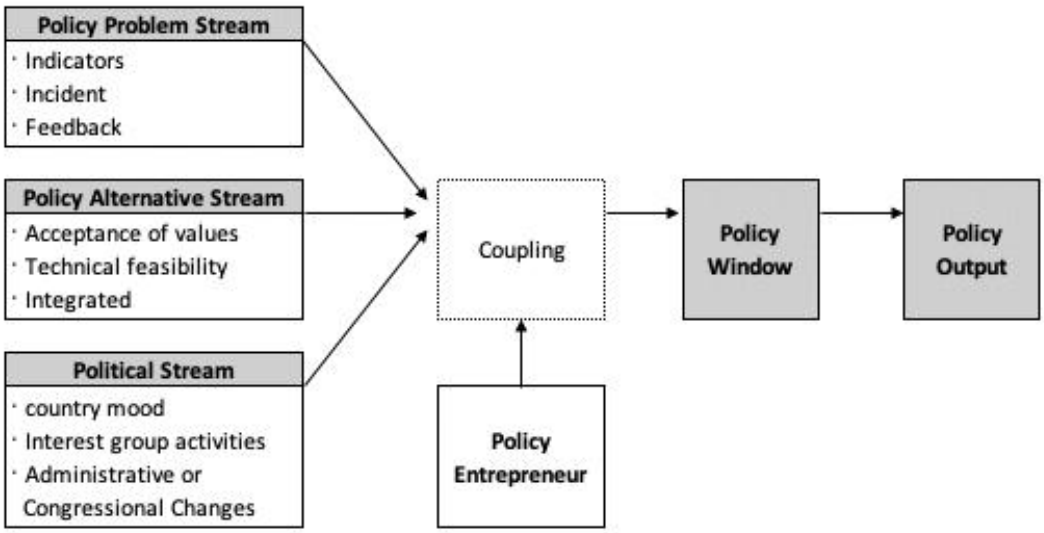
The process of the policy begins with setting up an agenda through problem recognition, and the policy is established by reviewing alternatives to solve the problem. These established policies go through the process of evaluating whether they have been implemented and effectively implemented (Parsons et al., 1995). Among them, there are various views on the process in which policies are formed. Lasswell (1956) viewed it as writing policy alternatives and selecting the final plan through collecting, predicting, and planning information. Lee Deuk-soon and Kim Moon-sung (2017) viewed the policy formation process as a series of policy agenda-setting processes and policy decision-making processes that set policy goals and officially determine policy products to be used in the policy execution process.

Models analysing the interaction of these policy processes vary, and policies can be classified into gradual or radical policies. Representatively, regarding incremental policy, there are Simon's (1957) bound rationality and Lindblom's (1959) Muddling Through which emphasise limited environmental factors in the policy process. These policy decisions continue to increase step by step and on a small scale depending on the current situation, and policies are determined through slight changes (Rajagopalan and Rasheed, 1995). Radical policy models include Kingdon's (1984) multiple stream framework and Baumgartner and Jones' (1993) punctuated equilibrium. Kingdon's (1984) multiple streams framework and Baumgartner and Jones' (1993) punctuated equilibrium analyse the environment that causes policy changes. In the process of policy creation, policies are created by the composition and perspective of policymakers and support for procedures rather than the continuity of policies. Therefore, radical changes can be disconnected, and significant policy changes can be made. In this respect, radical policy changes are related to changes in the role of government closely related to policy (Anon, 2012).

Among them, Kingdon transformed the Garbage Can Model and built it into his model (Greer, 2015; Kingdon, 2013). Kingdon wanted to clarify why some agendas were highlighted and others were ignored and noted the process of selecting policy alternatives (Kingdon 1984; Choi Seong-Gu 2014). The basic structure of the multiple stream framework includes three flows of independent policy problem stream, policy alternative stream, and political stream. Each of the three flows usually operates independently, with its own unique rules and dynamics. These three flows are combined into the activities of policy entrepreneurs, and policies are calculated

through the policy window created. Kingdon's multiple streams framework is evaluated to explain the policy process more realistically by considering that policy decisions or changes may occur differently depending on how the three flows are combined (Lee and Kim, 2017).

< Figure 1. Kingdon's Multiple Streams Approach (Lee and Kim, 2017) >



(1) Policy Problem Stream

In order for a specific problem to be solved or a policy to be prepared, it must first attract the attention of people who influence the policy, such as policymakers (Lee and Kim, 2017). In other words, the flow of problems refers to a situation in which several policy issues receive attention from people inside and outside the government (Kingdon, 2013). Kingdon (2013) suggests indicators, focusing events and feedback as a means of recognising problems. In the flow of policy problems, policymakers and the public can

grasp the existence and intensity of policy problems through indicators such as cost, unemployment, and poverty rates (Chang, 2017). Sometimes, it is possible to pay attention to policy issues only through focusing events such as accidents that occur through disasters and disasters and feedback from previously executed projects (Chang, 2017). At the same time, the government's budget also serves as a stimulus for a series of concerns and proposals to become famous (Kingdon, 2013). In Kingdon's Multiple streams framework, policy problems exist even before they were selected as policy problems, and policy problems that have been ignored for reasons such as indicators, focusing events, and feedback should be newly and suddenly dominated (Lee and Kim, 2017).

(2) Policy Alternative Stream

According to Kingdon (2013), the flow of policy alternatives refers to the process in which policy proposals are created, discussed, rewritten, and accepted for serious consideration. Policy communities such as bureaucrats, scholars, research institutes, and interest groups mainly present ideas for solving problems. Many ideas are presented within the policy community and float like 'a soup' Only a few ideas are chosen to be considered. At this time, if the alternative is adopted as a policy, the alternative is selected based on the technical feasibility to be faithfully implemented and the value that the alternative aims for is consistent with the value of public opinion or society (Kingdon, 2013). The flow of policy alternatives is greatly influenced by the existence and degree of differentiation of the policy community, the activities of policy entrepreneurs, and the intervention of interest groups (Lee and Kim, 2017; M et al., 2017).

(3) Political stream

The flow of politics refers to a political situation in which awareness of the seriousness of policy problems and the need for solutions is spreading (Chang, 2017). Kingdon (2013) refers to the public mood, pressure group campaigns, election results, and changes in Congress and administration. The public mood refers to a situation in which public opinion is formed as many people have a common sense of the problem. Therefore, government officials need to take action to detect this change in mood and promote specific items on the agenda according to the public mood. Therefore, the public mood is characterised by a strong recognition element of policy decisions (Herweg et al., 2018). Interest groups influence policymaking through campaigns to support or oppose policy issues and alternatives. Even if the president changes or the majority party changes, there is a strong trend of support or opposition to policy issues and alternatives (Chang, 2017; Kingdon, 2013). Above all, when the public mood and changes in the administration or the majority of congress are combined with each other, it has the most significant influence on the setting of policy agendas (Chang, 2017).

(4) Policy entrepreneur and Policy window

Policy entrepreneurs are actors who combine three flows to open a policy window (Kingdon, 2013). They become a person or group who tries to mobilise all resources to create a combination between flows to suit their intentions and to open a policy window to make

sure that the policy direction is in the direction they want. Kingdon (2013) saw that it was possible for a policy issue to be set as a policy agenda when the three flows were combined at some point, and at this moment, the policy window opened. Kingdon (2013) said, "The policy window is an opposition for proposals to push them per solutions, or to their special problems." Policy entrepreneurs also play an important role in the process of opening the policy window (Chang, 2017). In addition, policy changes do not always occur when the policy window opens, and the role of the policy entrepreneur is essential to lead to successful policy changes.

3. UK's COVID-19 response and key policies afterwards

1) Impact of New Public Management Theory

Britain's Conservative Party, which came to power in the 1979 election, diagnosed that government policies such as nationalisation and welfare strengthening, which previous Labour governments had implemented, deepened lethargy and inefficiency in society as a whole (Jang, 2004). As a response strategy to this, a series of reform measures such as privatisation, deregulation, and the implementation of a small government was implemented, which was called Thatcherism. In other words, it was to minimise state roles and interference in the economic sector and promote a powerful state's vision in the social and community sectors.

The first country in the world to transition to a capitalist economy is UK. In particular, it led industrial development through the industrial revolution in the first half of the 19th century. However, it began to slow down around 1880 and suffered losses, depression, and panic during World War I. Since the end of World War II, major industries such as telecommunications and energy have been nationalized to increase the efficiency of national development and resource allocation. In the 1970s, criticism of public enterprises spread as problems, high costs and inefficiency, were revealed in difficult economic situations such as the oil crisis and the increase in unemployment. As the Conservative government, which insisted on reducing state economic intervention to improve the efficiency of the national economy, won in 1979, the privatization was promoted as one of the policies to reduce the government role and expand the market (Ham, 1998). The Conservative Party also had a political purpose to weaken the influence of labour unions through the

privatization of public enterprises.

2) Response to COVID-19 and impact on the industry

In order to overcome COVID-19, the UK government also promoted various support policies such as tax cuts and various subsidies to ease the economic recession and maintain employment. In terms of employment, the income of wage workers was preserved, while a certain level of income was also provided to self-employed people. In addition, VAT was temporarily reduced for service industries such as accommodation and temporarily exempted from taxes imposed on real estate used for business purposes. In addition, support such as loan guarantees was promoted for companies suffering from COVID-19. The UK government's support policy through enactment minimized the economic downturn and strengthened the government's role. Excessive financial requirements, such as tax cuts, have caused the UK's financial situation to deteriorate.

< Table 2. UK's Policy for COVID-19 Response (BOK, 2020) >

Part	Contents
Employment	- Coronavirus Job Retention Scheme(CJRS) - Self Employment Income Support Scheme(SEISS) - Job Retention Bonus - Kickstart Scheme and Job Support Scheme
Tax	- VAT payment deferral policy - Temperory reduction of VAT rate in certain hospitality sectors - Business rate Holiday and Stamp duty Holiday

Loan Guarantee	- Covid-19 Corporate Financing Facility(CCFF) - Coronavirus Business Interruption Loan Scheme(CBILS) - Bounce Bank Loan Scheme(BBLS) - Future Fund and Trade Credit Reinsurance Scheme
Funding	- Subsidies paid out to businesses - Local Restrictions Support Grant
Other	- Emergency Measures Agreements for train operating companies(EMAs) - Eat Out to Help Out

Major industries in the UK are divided into services, production, and construction, and in particular, service industries such as retail, tourism, and finance for more than 80% of the UK economy. Due to COVID-19, GDP in 2020 fell 11.0% year-on-year, and by industry, services fell 8.9%, production fell 8.6%, construction fell 12.5%, and agriculture fell 9.4%. However, due to the government's support policy, the manufacturing industry is expected to increase productivity by 2022 through productivity improvement, manpower investment, and new product development, and the service industry increased significantly without transportation services. Recently, however, the recovery has slowed due to inflationary pressures such as rising consumer prices and interest rate hikes.

< Table 3. UK GDP Growth Rate (%) >

	2019	2020	2021	2022
GDP	1.6	-11.0	7.6	4.1
Agriculture	-1.7	-9.4	-0.4	3.5
Manufacturing	-1.5	-9.9	6.8	-4.8
Production	-1.3	-8.6	4.7	-3.6
Construction	2.5	-12.5	12.7	5.6
Services	1.8	-8.9	7.4	5.5

* Office for National Statistics (www.ons.gov.uk)

3) Government policy after COVID-19

(1) Build Back Better: our plan for growth (2021.3)

In preparing for the post-COVID-19, the UK government announced a policy (Build Back Better) explaining its government plan to support economic growth through massive investments in infrastructure, technology and innovation in 2021. First of all, it was decided to focus on three areas: infrastructure, technology, and innovation for growth. In the infrastructure sector, as part of a £100 billion capital expenditure plan, it is to attract short-term economic activities and lead long-term productivity gains through investments in broadband, roads, and railways. In addition, it was decided to support the achievement of Net-Zero through £12 billion in funding for the project through the 10 major plans for the green industrial revolution. In addition, the technology sector supported productivity improvement and supported the cost of technology learning through high-quality technology and training. It also encouraged innovation by supporting and encouraging the development of creative ideas and technologies that shape UK's future high growth, sustainable and safe economy. To this end, it was decided to raise a new £370 million fund to support the expansion of innovative projects and promote drastic regulatory improvement.

< Table 4. Three core pillars of Growth >

Classification	Contents
Infrastructure	- Stimulate short-term economic activity and drive long term productivity improvements via record investment in broadband, roads, rail and cities, as part of our capital spending plans worth£100 billion next year. - Connect people to opportunity via the UK-wide Levelling

	Up Fund and UK Shared Prosperity Fund, as well as the Towns Fund and High Street Fund, to invest in local areas. - Help achieve net zero via £12 billion of funding for projects through the Ten Point Plan for a Green Industrial Revolution. - Support investment through the new UK Infrastructure Bank which will 'crowd-in' private investment to accelerate our progress to net zero, helping to level up the UK. This will invest in local authorityand private sector infrastructure projects, as well as providing an advisory function to help with the development and delivery of projects.
Skills	- Support productivity growth through high-quality skills and training: transforming Further Education through additional investment and reforming technical education to align the post16 technical education system with employer demand. - Introduce the Lifetime Skills Guarantee to enable lifelong learning through free fully funded Level 3 courses, rolling out employer-led skills boot camps, and introducing the Lifelong Loan Entitlement. - Continue to focus on the quality of apprenticeships and take steps to improve the apprenticeship system for employers, through enabling the transfer of unspent levy funds and allowing employers to front load apprenticeship training.
Innovation	- Support and incentive the development of the creative ideas and technologies that will shape the UK's future high-growth, sustainable and secure economy - Support access to finance to help unleash innovation, including through reforms to address disincentives for pension funds to invest in high-growth companies, continued government support for start ups and scale ups through programmes such as British Patient Capital, and a new £375 million Future Fund: Breakthrough product to address the scale up gap for our most innovative businesses.

	- Develop the regulatory system in a way that supports innovation - Attract the brightest and best people, boosting growth and driving the international competitiveness of the UK's high-growth, innovative businesses - Support our small and medium-sized enterprises (SMEs) to grow through two new schemes to boost productivity: Help to Grow: Management, a new management training offer, and Helpto Grow: Digital, a new scheme to help 100,000 SMEs save time and money by adopting productivity-enhancing software, transforming the way they do business

In addition, for the long-term development of the UK, it was decided to support the leveling of the UK as a whole, the transition to Net-Zero, and strengthening the global UK status. First, it supported the growth of regions suffering from difficulties throughout the UK and supported digitization and improvement of traffic conditions. In addition, in order to switch to Net-Zero, it expanded offshore wind power, carbon storage and use (CCUS), and supported the development of the hydrogen industry. In addition, UK support to play its role in the global market by strengthening cooperation with global partners, including the G7 chair country and COP 26, and making international efforts to strengthen the World Trade Organization, including free and fair trade.

< Table 5. Long-term development of the UK >

Part	Contents
Level up the whole of the UK	- Regenerate struggling towns in all parts of the UK via the UK Shared Prosperity Fund and the UK-wide Levelling Up Fund. - Realise our long-term vision for every region and nation to have at least one globally competitive city at its heart to

	help drive prosperity. This includes City and Growth Deals, £4.2billion in intra-city transport settlements from 2022-23, and continued Transforming Cities Fund investment to 2022-23. - Catalyse centres of excellence, supporting individuals across the country to access jobs and opportunities by ensuring digital and transport connectivity, by establishing a new UK Infrastructure Bank in the North of England and by relocating22,000 Civil Service roles out of London. - Strengthen the Union, creating Free ports across the country - including in Scotland, Wales and Northern Ireland - and delivering the Union Connectivity Review, reviewing options to improve our sea, air and land-links across the four nations.
Support the transition to the Net zero	- Invest in net zero to create new opportunities for economic growth and jobs across the country, including supporting up to 60,000 jobs in the offshore wind sector,50,000 jobs in carbon capture, usage and storage (CCUS)and up to 8,000 in hydrogen in our industrial clusters. - Grow our current net zero industries and encourage new ones to emerge. This includes working with industry, aiming to generate 5GW of low carbon hydrogen production capacity and capture 10Mt CO2/year using CCUS by 2030, and ending the sale of new petrol and diesel cars and vans in 2030.
Support our vision for Global Britain	- Cooperate with partners to inspire and shape international action on our domestic priorities, including through our G7 Presidency and COP26. - Role-model openness to free and fair trade, working internationally to strengthen the multilateral system and the World Trade Organization and using preferential agreements and bilateral trade relationships to directly expand trading opportunities for UK businesses. - Develop a new export strategy to align our support for exporters with our plan for growth and sectoral priorities, opening UK Government trade hubs in Scotland, Wales and Northern Ireland and increasing UK Export Finance lending capacity.

(2) Promoting Climate Change Response

- UN Climate Change Conference

In October 2021, the General Assembly of the Parties to the UN Framework Convention on Climate Change (COP26) was held in Glasgow, UK. The international community's efforts to achieve the goals of the Paris Agreement have been emphasized at a time when carbon neutrality in each country is accelerating due to the increase in interest in the environment after COVID-19. COP26 agreed to the Glasgow Climate Convention, which included a gradual reduction in coal power generation, to limit the global temperature rise of 1.5 degrees.

< COP 26 Main Contents >

❶ Maintaining the upper limit of 1.5℃ temperature and phase-down of coal power generation (phase-down)

❷ Each country's current National Determined Contributions (NDCs) are reset in 2022 and set a reduction target for the next 10 years every 5 years from 2025

❸ Promises to Expand Financial Support in Developed Countries

* COP16 agreed to raise $100 billion annually until 2020, but failed to achieve it, and extended the funding period to 25 years at this meeting

❹ U.S. and China Jointly Declare to Cooperate and Strengthen Response to Climate Change Crisis

❺ Measures to reduce methane gas emissions by 30% by 30 years and ban deforestation

* More than 100 countries participate, excluding China (the largest emitter), Russia, and India
* More than 130 countries participate, which account for 85% of the world's forests

In addition, the UK (2022) announced a major climate support package to deliver Glasgow legacy to COP27. First, in response to the existential threats of climate change such as drought in Somalia, the fund for climate adaptation is expanded from 500 million pounds in 2019 to 1.5 billion pounds in 25 years. In addition, in order to implement the declaration of forest and land use declared by COP26 with the aim of reversing the suspension of forest loss by 30 years, the UK decided to provide £90 million for the preservation of the Congo Basin, home to about 10,000 tropical plants and various endangered species. In addition, in order to accelerate the development of clean technology at a time when the world is promoting green innovation and energy conversion, an additional £65.5 million be provided to clean energy reform facilities that support researchers in developing countries.

- Policy announcement

Prior to the COP26, the UK announced the 'Industrial Decarbonization Strategy' in March 2021 and 'Net Zero Strategy: Build Back Greener' and 'Digitalizing our energy system for net zero' in October 2021 to play a leading role in economic development and global climate change response.

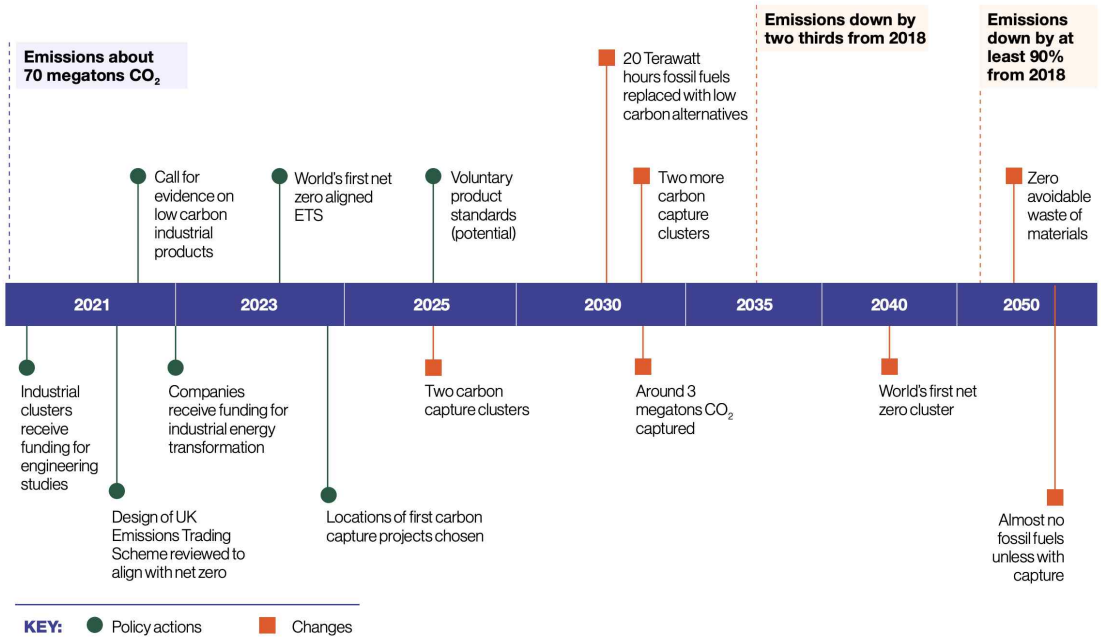
'Industrial decarbonization strategy (UK, 2021)' largely consists of three parts: creating a foundation for realizing net zero in the industrial sector, industrial process innovation, and expanding potential. First, in order to provide net zero to the industry, it provides a clear signal to the industry and provides a foundation for investors to choose low carbon by providing carbon prices and

supporting low-carbon infrastructure. In addition, consumers should choose low carbon for low-carbon products by improving data transparency. In addition, industrial process innovation supports the introduction of core technologies such as hydrogen and CCUS and the establishment of infrastructure in consideration of industrial demand and technology. It also builds an infrastructure to improve the efficiency of energy and resources used to produce industrial products and helps accelerate innovation in low-carbon technologies. Finally, in order to achieve Net zero in the global market, UK expand partner cooperation and support the creation of new jobs through the deployment of low-carbon infrastructure in the industrial sector. In addition, industrial decarbonization progress that is a complex process are managed well.

< Table 6. 'Industrial decarbonization strategy' summary >

Part	Contents
Foundations to deliver net zero for industry	- Why we need a strategy and our approach ; reduce by at least two-thirds by 2035 and 90% by2050 - Getting investors to choose low carbon - Getting consumers to choose low carbon
Transforming industrial processes	- Adopting low-regret technologies and building infrastructure - Improving efficiency - Accelerating innovation of low carbon technologies
Maximising the UK's potential	- Net zero in a global market - Levelling up - Tracking progress

< Figure 2. Indicative Road-map to Net-Zero UK industry >



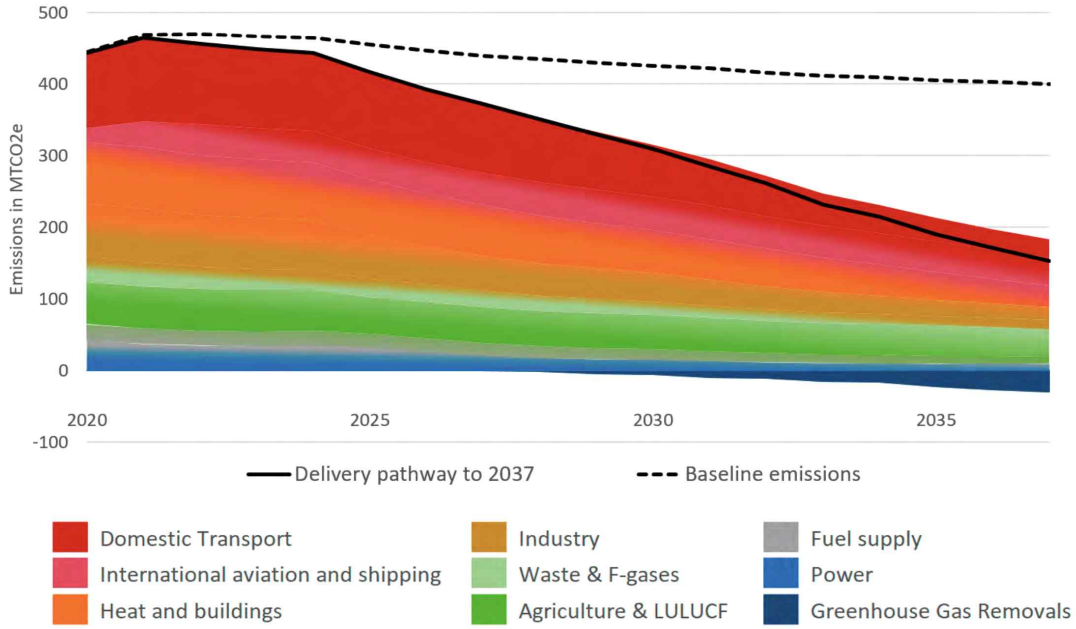
'Net Zero Strategy: Build Back Greener (UK, 2021)' presented seven areas that need to reduce greenhouse gases: power, fuel supply and hydrogen, industry, heating and buildings, meteor, natural resources, and greenhouse gas removal. It also includes seven government support policies: innovation for carbon neutrality, green investment, green jobs and technology, government carbon neutrality, local climate action, consumer choice, and international leadership and cooperation.

< Table 7. 'Net-Zero Strategy' summary >

Part	Contents
Reducing Emissions	1) (Power) By 2035 the UK will be powered entirely by clean electricity, £120 million Future Nuclear Enabling Fund, 40GW of offshore wind by 2030 2) (Fuel Supply and Hydrogen) fund our new hydrogen and industrial carbon capture business models, £140 million 3) (Industry) capture 20-30 MtCO2 per year by 2030, £315 million Industrial Energy Transformation Fund (IETF)

	4) (Heat & Buildings) by 2035, no new gas boilers will be sold, £450 million three-year Boiler Upgrade Scheme 5) (Transport) 2030 commitment to end the sale of new petrol and diesel cars, and 2035 commitment that all cars must be fully zero emissions capable, £620 million for zero emission vehicle grants 6) (Natural Resources, Waste & F-Gases) Farming Investment Fund and the Farming Innovation Programme to invest in equipment, technology, and infrastructure 7) (Greenhouse Gas Removals) g £100 million of investment in GGR innovation
Supporting the Transition	1) (Innovation for net zero) investment in R&D to £22 billion, Publish the UK's first Net Zero Research & Innovation Framework 2) (Green Investment) UK Infrastructure Bank (UKIB) to crowd in private finance, support more than £40 billion of investment, Continue to issue green gilts 3) (Green Jobs, Skills and Industries) Publish sector and supply chain development plans and UK Critical Minerals strategy, Reform the skills system 4) (Embedding Net Zero in Government) reflect environmental issues in national policy, New measures to reduce emissions from Government's £292 billion procurement spending, Continue to fund the Public Sector Decarbonisation Scheme 5) (Local Climate Action) Set clearer expectations on how central and local government interact in the delivery of net zero 6) (Empowering the Public and Business to Make Green Choices) Explore how to improve and enhance public facing climate content and advice on gov.uk., Increase awareness of net zero and empower businesses and the public to make green choices, 7) (International Leadership and Collaboration) Increase global climate action through our push for global net zero, Deliver against net zero on a trajectory in line with the Paris Agreement, Double our International Climate Finance

< Figure 2. Indicative delivery pathway to 2037 by sector >



In addition, in March 2023, 'Power Up Britain' was announced, which includes contracts to fulfill Net Zero pledges, such as strengthening energy security and utilizing economic opportunities for energy conversion.

< Table 8. 'Powering Up Britain' Direction >

Energy security	- Setting the UK on a path to greater energy independence
Consumer security	- Bringing bills down, and keeping them affordable, and making wholesale electricity prices among the cheapest in Europe
Climate security	- Supporting industry to move away from expensive and dirty fossil fuels
Economic security	- Playing our part in reducing inflation and boosting growth, delivering high skilled jobs for the future.

It supports continuous investment, job creation, and productivity improvement to secure energy security, implement net zero, and utilize energy conversion through small modular reactors, CCUS,

and the hydrogen economy. It includes continuous investment in green industry development competition and international cooperation to secure energy security and promote a global transition to clean technology. In this way, the UK is actively promoting climate change response in the process of overcoming the COVID-19 situation and strengthening future competitiveness.

< Table 9. 'Powering Up Britain' summary >

Part	Contents
Delivering Energy Security and Net Zero	- Delivering Great British Nuclear (GBN) - Making a world-leading commitment to Carbon Capture, Usage and Storage - Delivering a Hydrogen economy - Accelerating deployment of renewables - Reducing our reliance on fossil fuels to heat our buildings - Reducing household bills by increasing energy efficiency - Decarbonising transport - Speeding up planning and networks - Mobilising private investment - Building on our COP26 Presidency
	- Securing UK investment in the race to develop green industries - International approach
Energy Security Plan	- Sets out the actions taken to secure energy supplies this winter and the next steps in ensuring resilience of our gas supplies - Demonstrates the actions we are taking to ensure more home-grown energy, by driving investment in renewables, CCUS, and nuclear - Sets out approach to reforming energy retail and electricity markets to support businesses and households

the Net Zero Growth Plan	- Responds to the expert recommendations made in the Independent Review of Net Zero - Demonstrates the actions we will take to ensure the UK remains a leader in the net zero transition - Strengthens delivery with a focus on the action we can take today to keep us on track to meet our carbon budgets - Meets our statutory obligations under the Climate Change Act (2008)
Delivering our plans	- Providing a secure, abundant and clean energy supply 1) Power generation 2) New clean energy systems and infrastructure 3) Networks and enablers - Reducing demand by increasing energy efficiency for homes and businesses. - Supporting the rest of the economy through the transition.

4) Legal system and governance

The UK has the Climate Change Commission, an independent statutory body established under the Climate Change Act 2008 (Lee, 2021). The UK enacted the Climate Change Act in 2008 to stipulate the world's first greenhouse gas reduction goal. In addition, in June 2019, the carbon neutral goal for 2050 was legalized for the first time. Based on this climate change law, the Climate Change Committee is in operation. The main task of the Committee on Climate Change is to set long-term carbon reduction targets and to advise on the carbon budget. In addition, the government is monitoring the implementation of reduction as a key role.

4. Korea Case Analysis

Korea has undergone rapid changes in the last 30 years. In Korean society, the 1987 democratic uprising was a historical turning point, and citizenship was enacted through constitutional amendment due to the challenge to the authoritarian regime. And the democratic system was introduced as the presidential election system was changed to a direct election system. Through this, civil society grows, and Korea develops into a democratic country. Since then, despite the IMF financial crisis in 1997, it has grown rapidly economically, achieving 7th place in the world of exports despite the COVID-19 situation in 2021. Through this Korean case, I would like to examine the changes in the role of the government in the industry and analyse the process of promoting carbon neutrality and digital transformation policies, which have emphasised the role of the Korean government in the recent COVID-19 situation.

1) New Public Management and the Role of Government

The Korean government became the first civilian government to seize power when President Kim Young-sam was elected in 1992, 31 years after Park Jung-hee's military in 1961. The ruling forces called the Kim Young-sam administration a civilian government because the owner of power is the people (Sin, 2011). The regime was transferred from the military government to the civilian government. The civilian government's dominant political and administrative ideology was change and reform. It focused on clearing up the legacy of military authoritarianism and restructuring the framework and norms of Korean society in democratisation and globalisation. At that time, innovation in the public sector was also

made according to this reform logic, and Korean politics and administration were globalisation significantly changed. In particular, the civilian government judged that it could not strengthen national competitiveness with a government-led development strategy.

Accordingly, the government reorganisation was carried out under the reduction and adjustment stance in contrast to the expansion-oriented one in the past. Upon the inauguration of the civilian government, the "administrative reform committee", an organisation directly under the president, was established. Based on this, the overall administrative reform, including reorganisation, was carried out. In particular, the size of the public sector was reduced by reorganising the Ministry of Power Resources and the Ministry of Commerce and Industry based on national consensus and consensus, reflecting the will to reform the small and robust government. This administrative reform is a reform of reduction management and has contributed to expanding the area of privatisation.

In addition, to respond to changes in the times, the government's functions were adjusted by strengthening environmental and welfare functions and reducing central control of local governments (Sin, 2011). In addition, the government sought to disclose the property of all public officials, judicial those involved in influence-peddling, and institutionalise anti-democratic or corruption and abuse of power through the Public Officials Ethics Act and the Financial Real Name Act (Jung, 1998).

In December 1997, President Kim Dae-Jung was elected in the 15th presidential election. The most urgent task for the government at that time was to overcome the IMF's economic crisis. In

December 1997, the Korean government had only $3.9 billion in foreign exchange reserves. The Korean government began the IMF management system as it received a bailout from the IMF to overcome the foreign exchange crisis (Kim, 2002). The main cause of the foreign exchange crisis was the opaque, subordinate and inefficient economic structure, such as overlapping and lax investment of monopoly conglomerates, financial insolvency, foreign exchange reserves, and exchange rate problems. In this situation, the Kim Dae-Jung government's reform goal focused on reviving the economy due to the IMF crisis. Public sector reform is actively promoted by accepting the NPM theory to deal with this foreign exchange crisis early. Inside the government, in order to create a small government, public institutions were merged, the number of public officials was reduced, and government expenditures were streamlined (Sin, 2011).

At the end of 2002, there were about 50 government-affiliated organisations, and the issue of equity was raised in managing budgets as ministries were managed sporadically by individual laws. To improve this, a comprehensive management system was established to promote the enactment of the Framework Act on Management of Government-affiliated organisations to increase management efficiency and accountability. In addition, a change in the fund system was promoted to use the government budget efficiently. Like the budget, the fund was institutionalised to be reviewed by the National Assembly, and transparency and efficiency were secured by strengthening the inspection and evaluation system for the operation of the fund.

In particular, efficiency-oriented reforms such as market economy, private-led, entrepreneurial management, competition and openness

were actively promoted to overcome the IMF financial crisis and restore the economy. Kim Dae-Jung The government's privatisation and reform of the public sector are being evaluated successfully(Jo, 2012). Privatisation is also seen as a way to raise funds for restructuring to overcome the financial crisis to maximise social welfare by enhancing the economic efficiency of public companies (MOEF, 1999). Kim Dae-Jung In July and August 1998, the government announced the privatisation and management innovation measures for public enterprises twice and actively promoted privatisation (Jo, 2012). Through this, nine large public corporations such as Pocheol, Korea Heavy Industries, and Korea Telecom were completely privatised, three were partially privatised, and 20 of the 61 public corporation's subsidiaries were privatised or merged.

In addition, the Kim Dae-Jung government focused on active regulatory reform. To promote efficient and consistent regulatory reform, the regulatory reform promotion committee was established under the president's dire by unifying the regulatory reform promotion, which had been diversified in the previous administration. Through this, standards for classification and judgment of administrative regulations were prepared, and investigations were conducted on existing regulations under laws and regulations operated by central administrative agencies. Through this, about 48.8% of the regulations were abolished, and 21.7% were improved (Sin, 2011). As such, the Kim Dae-Jung government was launched amid the IMF economic crisis, actively accepting the theory of new public management and implementing various administrative reforms to realise small governments and improve the efficiency of the public sector.

In this process, the public sector was saved and reduced, and

performance was emphasised, competition and privatisation, procedural simplification, and transparency were promoted. Above all, unlike other governments, privatisation and regulatory improvement, which have been actively promoted, are complementary means to pursue the common goal of restoring market functions, that is, autonomous competition (Kim, 1995).

The direction of reform in the public sector and the era of globalisation have also caused industrial policy changes. Privatisation and deregulation actively promoted by the government enabled market expansion and competition (Kim, 1995). The function of the market is expanded by transferring industries that the public sector has been in charge of to the private sector through privatisation. For example, Pohang Steel Co., Ltd., which led Korea's steel industry, started as a public company in 1968 and became the foundation for Korea's economic growth. Since its privatisation in 2000, it has grown into a competitive national company in the global steel industry by securing technology and expanding competition (Gang et al., 2009).

Deregulation promotes competition by reducing government control and interference and ensuring maximum private autonomy and creativity. In the early 1960s, the Korean government revised the Oil Industry Act to promote competition in the domestic oil market and strengthen external competitiveness (Kim, 1995). In this way, the government's reform enhances the competitive function inside and outside the market by expanding the external target to which the market function is applied and, at the same time, increasing the range of autonomous choices of economic players (Kim, 1995). The government reform following this new public management has changed the role of the government in industrial policy in the

progress of globalisation. Globalisation accelerated by the establishment of the WTO in 1995 has caused a significant change in traditional industrial policy and the role of the government. With the establishment of the WTO, state subsidies were prohibited, and industrial policies in the conventional sense of developing countries were no longer available (Lim, 2008). In this situation, the Korean government in the 1990s also set the industrial policy as the primary direction, from the development industry promotion policy to the market-led environmental adjustment policy.

In addition, the economic management stance was also shifted to private initiative. In this situation, the industrial policies that the government led in the past through individual industrial development laws such as machinery, shipbuilding, electronics, steel, petrochemicals, textiles, and non-ferrous metals changed. First of all, in 1986, due to the global trend of openness and autonomy, support policies for each function, such as R&D, workforce, and location, which excluded specificity, became necessary, and the existing seven individual industrial development laws were merged into the Industrial Development Act. Since 1990, under the Kim Dae-Jung government, the Industrial Development Act of 1999 was revised entirely under the basic policy of creating a market-led environment (MOTIE, 1999). The industrial development system was reorganised to efficiently respond to changes in internal and external industrial conditions, such as the introduction of the WTO system in 1995, the membership of the OECD in 1996, and the 1997 IMF economic crisis. As a result, the role of the government in fostering individual industries in industrial policies was reduced from enabling to support, and the role of the private sector was expanded.

As such, the Korean government actively accepted the NPM

theory in the context of the IMF economic crisis. It became the driving force for reform internally and externally in the public sector. As a result, privatisation and deregulation, along with the improvement of the efficiency of the government, led to the realisation of small governments and the expansion of market functions. In particular, these public sector reforms shifted from government-centred to private sector in fostering individual industries along with the trend of globalisation, and the role and function of the government indirectly changed, focusing on a support such as industrial structure innovation and efficiency.

2) The influence of COVID-19

In the late 1990s, large and small incidents such as the Asian financial crisis, the 2007-2008 subprime mortgage crisis and the Lehman-Bradance crisis in the United States continued to occur. In addition, infectious diseases spread worldwide, such as SARS in 2003 and MERS in 2015. However, COVID-19, discovered in December 2019 in a group pneumonia outbreak centred on the fisheries market in Wuhan, Hubei Province, China, as of July 3, 2022, has caused more than 546 million infections and 6.3 million deaths worldwide (WHO, 2022). As the situation has been prolonged since the WHO declared the COVID-19 pandemic in March 2020, the COVID-19 pandemic has caused social and economic changes along with the spread and transmission of many people around the world. Measures such as social distancing and global shutdown to prevent the spread of COVID-19 have changed our daily lives and caused the overall economic deterioration. As non-face-to-face economic activities of economic actors became commonplace, the way of action changed online and non-face-to-face (Jo and Kim,

2020). Due to social distancing, sales of non-face-to-face industries such as online shopping and virtual reality increased and remote work using online spread. According to each country's movement restrictions and border blockade measures, it has a direct impact on the economy, such as a decrease in consumption, a contraction in the labour market, and a reduction in the size of global trade(Jo et al., 2020). In addition, economic activities are considerably shrinking, with private consumption, corporate production, and investment decreasing due to COVID-19. As a result, the global (GDP) recorded -3.4% and Korea -0.9% in 2020, causing negative growth worldwide and slowing global economic growth (OECD, 2022).

This unprecedented situation caused by COVID-19 is becoming a new normal. In April 2020, WHO Director-General said, "The world will not and cannot go back to the way things were there. There must be a "new normal" - a world that is healthier, safer and better prepared." COVID-19 is affecting the economy and its new role.

The first experienced a cleaner Earth due to a temporary pause worldwide caused by COVID-19. As the world spent a "time of pause" to block infectious diseases, the atmosphere of China and India, which are representative carbon emitters, became clean, and the canals in Venice, Italy, were clear enough to shine (Munhwa, 2020). Suspension of business operations and restrictions on movement due to blockade measures by each country to prevent the spread of COVID-19 have reduced energy demand and affected environmental improvement such as air quality due to the reduction of greenhouse gases (Go, 2020). According to the IEA report (2020), global power demand fell by 1.5% in 2020, mainly coal power generation, which was the most significant decline since

World War II. In particular, disasters and damages caused by abnormal weather such as floods and droughts that have occurred recently are raising awareness of the climate crisis (Yoon, 2021). More than 70 countries, including the US, EU, UK and South Korea, which account for 76% of global carbon emissions, have declared carbon neutrality, meaning zero net carbon emissions (UN, 2022). At the 26th UN Climate Change Conference of the parties in Glasgow in November 2021, more than 90% of the world's GDP was Net Zero and 153 countries agreed to continue their efforts to reduce greenhouse gas emissions by setting new 2030 Nationally Determined Contribution (NDCs). As such, interest and efforts in the environment that began with COVID-19 are accelerating worldwide.

Second, COVID-19 is expected to be a tipping point in the speed and range of digital transformation, and a digital transformation strategy from a different perspective is required (Beak, 2022). In the era of the 4th Industrial Revolution with the development of information technology, the digitalisation of the economy was in progress. However, the unmanned, robotic, delivery economy, online content industry, and digital-oriented industrial structure are leading the overall introduction and spread of digital throughout national society, including economy, society, and culture, as well as changes in corporate growth. In this situation, the digital transformation strategy also presents important policy tasks to revitalise the national economy and strengthen industrial competitiveness.

Third, the global shutdown caused by COVID-19 is weakening globalisation and expanding regionalism (BOK, 2020). The vulnerability of the global supply chain has been highlighted due to production disruptions and the lack of core materials due to each

country's blockade measures. As a result, the de-globalization phenomenon is expected to accelerate as countries strengthen protectionism, intra-regional trade, and restrictions on human exchanges from the perspective of their preferred stocks. In particular, the economic damage caused by COVID-19 seems to be greater than the U.S.-China trade dispute (Yoon and Ahn, 2021). In addition, de-Chineseization due to the expansion of trade disputes between the U.S. and China is emerging as a new global trend for regionalism, and competition between countries to attract high-tech industries such as semiconductors is accelerating.

The most significant change due to COVID-19 is the role of the government. With the COVID-19 economic recession and international closure, restrictions on movement between countries and, above all, quarantine are being emphasised, the role of the government is growing and the role of the private sector is being reduced (Jo et al., 2020). The British Economist published a column titled "the world is entering a new era of big government" in November 2021. Despite crises such as bureaucracy in large governments, governments worldwide spent 16% of global GDP and $17 trillion to overcome the COVID-19 situation. In particular, the United States invested $1.8 trillion to expand the welfare state, and Europe paid 750bn euros ($850bn) in investment funds. Public finance pursues the interests of groups that can be better met by collective choices and joint actions by groups or communities, including government revenues and expenditures, budget processes, and financial decisions (Tanzi, 2020). Among them, public spending is the most effective means of realising the government's policies, and the increase in government spending is closely related to the increase in the role of the government (Salamon, 2002). To alleviate the impact of the economic recession, each country's central banks

cut their key interest rates, expanding liquidity in the market and implementing fiscal expansion policies (Jin et al., 2020). The Korean government also increased government spending from 475 trillion won in 2019 to 547 trillion won, including the third supplementary budget in 2020 and 604 trillion won, including the second extra budget in 2021 (MOEF, 2019;2020;2021) . In particular, in July 2020, Korea announced the "Korean New Deal" centred on the Green New Deal and the Digital New Deal to overcome the economic crisis caused by COVID-19 and announced that it would invest about 160 trillion won (national budget of 114.1 trillion won) by 2025.

3) Korea's Climate Change Response (carbon neutrality) and Digital Transformation Policy

The drastic increase in spending by the Korean government to cope with climate change (carbon neutrality), which is an important task to strengthen the competitiveness of future industries while overcoming the economic crisis caused by COVID-19, can be seen as expanding the role of the government. However, it is necessary to find out how the role of government was affected socially and politically at the time in addition to government spending and whether the expansion of the role of government in the process is the only reasonable direction for policy implementation. To this end, let's examine the development of the role of the government by analysing the process of preparing carbon neutrality and digital transformation policies promoted by the Korean government from the perspective of Policy Problem Stream, Policy Alternative Stream, Political stream, Policy entrepreneur and Policy window through Kingdon's MSA.

(1) Policy Problem Stream

The international community first adopted the Paris Agreement at the 12th United Nations Framework Convention on Climate Change (UNFCCC), General Assembly, in December 2015, following the (UNFCCC) and the 1997 Kyoto Protocol (Choi, 2022). The Paris Agreement is an international agreement to limit the average global temperature rise significantly below the pre-industrial 2 ℃ by 2100 and further limit the temperature increase to 1.5 ℃ or less, declaring carbon neutrality as a comprehensive policy direction. In particular, it is experiencing various changes in the flow of climate change around the world. As the range of climate change increases due to temperature rise, changes in the state system are also increasing due to weather changes such as drought, forest fires, heavy rain, and storms (Lee, 2022). Korea's warming trend is much stronger than the global average (chosun, 2021). As of 2018, the average annual temperature has risen by 1.8℃ over the past 106 years. Compared to the past 30 years (1912-1941) and the last 30 years (1988-2017), summer has been extended by 19 days, and winter has been shortened by 18 days (MOE, 2019). In addition, record-breaking droughts and floods occurred, including severe droughts in 2015 and the all-time rainy season in 2020. This weather change is raising awareness of climate change among the people.

The core of the Fourth Industrial Revolution, which was a key agenda of the Daphos Forum in 2016, is the convergence of O2O (Online 2 Offline) (KCERN, 2016). O2O convergence refers to the real-time integration of data and software in space between the physical reality of the real world. This fourth industrial revolution

features ubiquitous, mobile Internet, sensors, artificial intelligence, and machine learning, leading the digital revolution beyond the third industrial revolution led by the Internet (Park, 2021). In addition, 5G, the next-generation network technology for the 4 Industrial Revolution, was used for the first time in the world in Korea on April 4, 2019 (Kookje, 2019). 5G is considered critical infrastructure in the era of the 4th Industrial Revolution as it not only improves transmission speed but also enables the connection of multiple devices and ultra-low delay real-time interworking. However, despite technological advances, the Korea Information Society Agency conducted a survey on digital technology utilisation by industry in 2018 and found that unlike some sectors such as finance and telecommunications, the utilisation rate of digital technology such as big data and AI was only 0.9% (MOTIE, 2020). In the case of Korea, which has an industrial structure centred on manufacturing in the future, digital transformation is an important task.

In this trend, COVID-19 again highlighted the need for carbon neutrality and digital transformation policies. McKinsey pointed out in an article titled "Addressing climate change in a post-pandemic world" in April 2020 that infectious diseases and climate change crises have in common with Non-Black Swan, Physical, Nonstation, and Nonlinear (McKinsey, 2020). Recently, the international community has been seeking strategies and policy measures related to the Green New Deal to respond to climate change, a low-carbon economy, and a carbon-neutral society. The EU announced plans to achieve regional carbon neutrality and expand related investment and employment by 2050 through the 'European Green Deal' (Moon et al., 2020). In addition, online shopping and delivery services caused by COVID-19 have been replaced offline. The digital

economy has spread not only in movies, medical care, education, and administration but also in industrial sites (BOK, 2002). To respond to this, the United States announced the 2020 Digital Policy for Physical Distancing and proposed a stimulus policy that can promote systematic management and recovery of the crisis after COVID-19 (KISTEP, 2020).

(2) Policy Alternative Stream

Even before adopting the Paris Agreement, the basis of the Post 2020 climate system in 2015, Korea promoted efforts to cope with climate change by setting and announcing the 2020 greenhouse gas reduction target in 2009 (OPM, 2016). Since then, the Framework Act on Low Carbon Green Growth, which covers climate change, energy measures, and sustainable development, was enacted in 2010. The Greenhouse Gas and Energy Target Management System was implemented in 2012 to manage large greenhouse gas emissions sites. In addition, the Act on the Allocation and Transaction of Greenhouse Gas Emission Rights was enacted in 2012. The institutional foundation for greenhouse gas reduction was established by introducing the emission trading system in 2015. With the launch of the new climate system, the goal of reducing greenhouse gas emissions in 2015 was set at 37% compared to BAU, and the 'First Framework Plan for Climate Change Response' and the 2030 National Greenhouse Gas Reduction Basic Road-map were established in 2016 to cope with climate change efficiently. In the basic road map, implementation measures for each part according to the reduction goals of each sector, such as power generation, industry, buildings, and transportation, were prepared. Among them, the development sector was responsible for the most significant

portion, and the industrial sector was required to consider the impact on the national economy. However, amid the emergence of the crisis of climate change after COVID-19 and the international community's response, the Korean government also declared a challenging goal of 2050 carbon neutrality in October 2020 and announced a strategy to promote 2050 carbon neutrality in December of the same year (Korean Government, 2021).

In addition, the Korean government made efforts to secure the world's highest level of ICT and strengthen national competitiveness through the combination of industry and ICT. As a result, it achieved the world's No. 1 ICT development index between 2015 and 2016 (MOSIT, 2016). After enacting the Special Act on Promotion of Information and Communication and Promotion of Convergence in 2014, the Korean government established mid- to long-term comprehensive measures for an intelligent information society in preparation for economic and social structural reforms in 2016 (MOSIT, 2016). Since then, the 4th Industrial Revolution Committee was established under the direct control of the president in 2017, and the 4th Industrial Revolution Committee and related ministries established a "4th Industrial Revolution Response Plan" in 2017. The main contents were to establish a foundation such as securing growth engine technology, creating industrial infrastructure and ecosystems, and responding to future social changes (4th IRC, 2017). The government's business was embodied in the "Korean New Deal" announced to overcome the COVID-19 crisis. In addition, the Digital-Based Industrial Innovation Growth Strategy announced in 2020 embodied industrial digital transformation policies such as timely and appropriate industrial data utilisation support based on industry demand (MOTIE, 2020).

(3) Political stream

Regarding the political stream, it was said that it is a flow that plays a decisive role in converting the flow of policy issues and alternatives into policy agendas related to political activities (Yang and Han, 2011). Therefore, in terms of political parties, interest groups, and civic groups trying to convert the social problems into policy agendas, this includes pledges on the timing of regime change and changes in the number of seats in the National Assembly.

Considering this, an important change in the political trend was the election of President Moon Jae-In in 2017. The government's five-year plan for state administration and the top 100 national tasks show the main policy directions of the Moon Jae-In government (NPAC, 2017). One of the strategies is the fourth industrial revolution led by the development of science and technology. The main content was to establish the Presidential Fourth Industrial Revolution Committee, a control tower to systematically prepare for the 4th Industrial Revolution and select and promote innovation tasks in each field, such as technology, industry, society, and the public. In addition, national tasks were chosen in relation to responding to climate change. To discover and foster eco-friendly future energy, the goal was to significantly expand the share of renewable energy generation to 20% by 2030. In addition, it was intended to reduce the fine dust by 30% within the term due to the complete closure of old thermal power plants to create a pleasant atmospheric environment and establish a sound implementation system for the new climate system.

The second was the 21st National Assembly election held on April 15, 2020. It was basically an election in the third year of the Moon Jae-In administration, an interim evaluation of the Moon Jae-In administration and an election that would affect the administration of state affairs for the rest of his term. The result of the election was that the ruling Democratic Party of Korea won 180 of the 300 seats, more than a majority. As a result, the policies promoted by the Moon Jae In government can be bolstered. In addition, the National Assembly launched the 4th Special Committee on Industrial Revolution in December 2017. The third is the voice of civic groups. Carbon-neutral advocacy groups include Greenpeace, the Green Future, the Green Alliance, and the Environmental Movement Union, which formed emergency action for the climate crisis and served as an advocacy group. In particular, the National Assembly urged the passage of a resolution calling for an emergency response to the climate crisis (Climate-Strike, 2020). On the other hand, economic organisations such as the Korea Chamber of Commerce and Industry and the Korea Employers Federation voiced concerns over the rapid promotion of carbon neutrality in the manufacturing-oriented industrial structure, calling for the government's active role as an area where companies cannot play alone (Econonews, 2021).

Global trends also had a political impact. It is strongly argued that a carbon border tax should be introduced in developed countries such as the EU and US to fairly bear the cost of greenhouse gas emissions as a tax levied on products produced and imported from countries with more carbon dioxide emissions than their own countries (Jeong et al., 2021). In addition, the digital service tax accelerates the digitalisation of the entire industry due to the taxation of profits or user fees obtained through digital services,

and digital tax discussions and introduction for global IT companies continue. As 136 countries finally agreed to impose global digital tax in October 2021 (KCA, 2022). In addition, major countries are continuing to play a role in the government and the ruling party to protect domestic industry and national interests and strengthen industrial competitiveness.

Above all, the recent unexpected shock of COVID-19 has overcome the economic crisis amid an economic recession and changed the form and perception of economic players due to COVID-19, increasing the demand for the role of the government in structural changes across the economy and society. In the international community, such as the United States and the EU, digital transformation and response to climate change were recognised as important tasks for the government (MOEF, 2020).

(4) Policy entrepreneur and Policy window

President Moon Jae-In and the central government are the most important policy for Korea's digital transformation and climate change response policy. Moon Jae In Digital transformation and climate change policies were reflected in the Moon Jae In government's five-year plan for state administration and 100 top national tasks established at the start of the government. Regarding policy establishment, there are the Ministry of Environment in charge of the environmental field, the Ministry of Trade, Industry and Energy in charge of industry and energy, and the Ministry of Land, Infrastructure and Transport in charge of transportation. As such, the central government took charge of the part under its jurisdiction, coordinated policies, and prepared policy alternatives for

problem solving. In addition, the central government, which is related to digital transformation, includes the Ministry of Trade, Industry and Energy, the Ministry of Science and ICT, the Ministry of Government Operations, and the Ministry of Culture, Sports and Tourism. In particular, the Ministry of Trade, Industry and Energy is in charge of commerce, trade, industry, trade and trade negotiations, foreign investment, medium-sized enterprises, industrial technology R&D policies, energy, and underground resources. Therefore, it establishes energy plans such as countermeasures for each industry, such as semiconductors and automobiles, plans for electricity supply and demand, and communicates closely with industries. Accordingly, the Ministry of Trade, Industry and Energy is a policy entrepreneur who plays an important role in responding to climate change and establishing digital transformation policies.

The most critical policy window of climate change response and digital transformation policy is COVID-19. COVID-19 has brought about a global economic downturn due to the spread of infectious diseases, but along with this, it has caused significant changes in the international community and presented tasks to strengthen future industrial competitiveness. In addition, the government's role, such as economic stimulus measures, was needed to overcome the economic crisis (Jo et al., 2020). Against this backdrop, the Korean version of the New Deal policy was prepared in July 2020 as a government policy tool to overcome the economic recession and respond to structural transformation, including the Green New Deal, the Digital New Deal, and the strengthening of the safety net. After that, climate change response and digital transformation policies become more concrete. In addition, a more robust promotion system has been formed due to COVID-19. Even before the spread of COVID-19 in November 2019, climate change response and digital

transformation policies were being promoted. At that time, the Green Growth Committee discussed the basic plan for responding to climate change about climate change. In addition, there was the 4th Industrial Revolution Committee established in 2017 for digital transformation. Separately, after the WHO declared a Pandemic in March 2020, an emergency economic council was launched in response to emergency economic situations (MOEF, 2020). The meeting, presided over by the president, was aimed at gathering pan-national capabilities as the top decision-making body for crisis response and preparing special measures to respond to crises and revive the economy quickly.

(5) Policy output and change

The start of the response to climate change and digital phone measures triggered by COVID-19 is the "Korean New Deal Comprehensive Plan" announced at the Korean New Deal National Report Conference (7th Emergency Economic Conference) presided over by President Moon Jae-In in July 2020. The "Korean version of the New Deal" is a national development strategy to overcome the economic crisis caused by COVID-19 and lead the global economy after COVID-19, with a total of 160 trillion won (114.1 trillion won) invested from 2020 to 2025, aiming to create about 1.9 million jobs. First, it supports fostering green infrastructure, renewable energy, and green industries to strengthen the response to climate change and realise an eco-friendly economy. In addition, realise accelerate the digital economy's transformation, SOC digitisation promoted to foster non-face-to-face industries such as DNA (Data-Network-AI) ecosystem and digitisation of medical care, and for safety and convenient national life.

In response to climate change, since 2050 carbon neutrality became a global agenda at the 2019 UN Summit, carbon neutrality declarations in major countries such as the EU, the UK, and the US have accelerated due to the expansion of awareness of the seriousness of climate change caused by COVID-19. Accordingly, Korea announced the 2050 carbon neutrality target in October 2020 and established the "2050 carbon neutrality promotion strategy" in December. Due to the transition to a low-carbon industrial structure and energy phones, there were concerns about increased industrial burden and weakening competitiveness, and the public burden due to inflation, but it was judged as a crisis and an opportunity. To promote carbon neutrality policy, the Green Growth Committee was expanded and reorganised into the 2050 Carbon Neutral Green Growth Committee under the President, and the "Basic Carbon Neutral and Green Growth Act" was enacted in September 2021.

In addition, the 2050 Long-term low greenhouse gas emission development strategies (LEDS) were submitted to the UN in December 2020 and 2030 Nationally Determined Contribution (NDC) was raised to 40% from a 26.3% reduction in greenhouse gas emissions in 2030 compared to 2018. In addition, the Ministry of Trade, Industry and Energy announced the Industrial and Energy Carbon Neutral Transition Vision and Strategy in November 2021 to convert to a low-carbon industrial structure and operates the Carbon Neutral Industry Transition Committee as a regular communication system between the government and companies.

In addition to the 'Korean New Deal' project, digital transformation has been established to utilise digital technology in industrial sites. In August 2020, the MOTIE announced a Digital-based Industrial

Innovation Growth Strategy to support the use of industrial data based on industrial demand and to build a foundation for industrial digital innovation through industrial intelligence funds and human resource development. In addition, it was decided to promote the establishment of a global online platform and foster digital exhibitions through 'trade digital transformation measures' (MOTIE, 2020). In particular, the Industrial Digital Transformation Promotion Act was enacted in 2021 to provide a basis for supporting the industrial data ecosystem and digital transformation of industries to resolve the lack of grounds for data utilisation in industrial sites (MOTIE, 2021). In addition, the Industrial Digital Transformation Promotion Team is operating to spread digital transformation in the industrial sector. The public and private sectors jointly form an Industrial Digital Transformation Committee to reflect the voices of the field in their policies (MOTIE, 2022).

< Table 10: Summary of Kingdon's MSA >

Part	Climate Change Response	Digital Transformation
Policy problem	- UN Paris Agreement - Weather fluctuations such as heat waves - Similarities between COVID-19 and Climate Change - European Green Deal	- 2016 Davos Forum - World's First 5G Commercialization - Low utilization of manufacturing digital technology - Accelerating the Digital Transformation with COVID-19
Policy Alternative	- 2015 Adopts Paris Agreement - 2010 Basic Act on Low-Carbon Green on Low Carbon Growth - 2012 Introduction of the Greenhouse Gas Target Management System, etc	- 2014 Enacted the Special Act on the Promotion of Information and Communication - 2015-2016, World No. 1 ICT Development Index

	- 2016, 2030 Greenhouse Gas Reduction Road-map	- 2017 Establishment of the Fourth Industrial Revolution Committee
Political stream	- 2017, New government - 2020, 21st National Assembly election - COVID-19 Shock Calls for More Government Aid	
	- Citizens' Organization Support for Climate Change Response	- Economic Organizations Demand the Role of the Government
Policy entrepreneur	- The president and the Central Government	
Policy window	- COVID-19 - Presidential Emergency Economic Conference	
Policy output and change	- 2020.7, Korean version of New Deal (Green New Deal, Digital New Deal, Strengthening Safety Net)	
	- 2050 Declaration of Carbon Neutrality - 2050 Carbon Neutralization Strategy - 2030 Up NDC - Enactment of the Framework Act on Carbon Neutrality - Industrial and Energy Carbon Neutral Transition Vision Strategy	- Digital-based Industrial Innovation Growth Strategy - Trade Digital Transformation Measures - Industrial Digital Transformation Promotion Act enacted

In summary, responding to climate change and digitizing were considered major policy issues of the government in the past. In addition, the government's policy alternatives to this were also discussed, and some were reflected in the policies and promoted. However, with the launch of the new government, policies that reflect challenging goals such as carbon neutrality were promoted in combination with political trends such as the COVID-19 situation and demands of civic groups and economic organizations. In addition, it was confirmed that the role of the government was expanded through policy measures such as expanding public finances, preparing a rapid system, and establishing a joint public-private committee to implement the policy.

5. Assessment and Policy Proposal

Earlier, I examined the theory of new public management and the case of UK policy. In the case of Korea, changes in the public sector due to the influence of NPM were investigated, and in particular, changes in the direction of industrial policy were investigated through privatisation and deregulation. In addition, I studied the emphasis on the role of the government in the unprecedented COVID-19 situation and analysed the process of responding to climate change caused by COVID-19 and forming digital transformation policies through Kingdon's MSA. Based on this, let's evaluate the changes in the role and function of the government in industrial policies that change according to the times and think about what is necessary to successfully promote climate change and digital transformation, which are important tasks to strengthen future industrial competitiveness.

1) Assessment of the role of government change

NPM, started in UK, is a typical model for administrative reform and has established a new strategy for public sector management (Sin, 2003). Positive aspects such as introducing private sector management techniques into the public sector, recognition of excellence in a competitive value, and transfer of authority are emphasised. Nevertheless, since public administration is essentially different from private sector management, it raises concerns that it is inappropriate to apply private sector management to the public sector and that other values in the public sector may weaken if efficiency and thrift are emphasised (So and Hong, 2004).

The Korean government actively accepted the NPM in a particular situation, such as the 1997 IMF financial crisis, and promoted innovation in the public sector. Kim Dae-Jung's government had considerable momentum in reforming small governments because of the economic aspect of overcoming the financial crisis and the social aspect of promoting reform throughout society led by the government (Bae, 2010). Kim Dae-Jung's government actively promoted government reorganisation, personnel system reform, fiscal and budget reform, privatisation, restructuring, and regulatory reform of public enterprises, aiming for a small government. The public sector reform in Kim Dae-Jung's government is sometimes pointed out as well as many limitations. Through the consolidation and workforce reduction, the public sector was reduced, and private management techniques centred on performance management techniques were introduced in the government sector to promote efficient government operation, but separate organisations such as the Budget Office were established due to political influence (Kim, 2005).

In addition, the privatisation and regulatory reform, which not only reorganises the government's function but also readjusts the role of the private sector, are significant in that they have been promoted with a much more advanced promotion system than previous governments (Kim, 2003). However, in this process, the privatisation of energy-public companies such as Korea Electric Power Corp. was criticised for its lack of autonomy and lack of awareness of the role of consumers in the privatisation process (Jo, 2012). In addition, systems and procedures were introduced in relation to regulatory reform, and regulatory maintenance such as abolition and improvement of regulations was carried out. Regulatory Affairs Department, which was 11,123 in 1998, and residual regulatory

affairs in 2002, amounted to about 6,000 (Kim, 2003). As such, The public sector reform in Kim Dae-Jung's government that accepted NPM has both achievements and limitations. In particular, privatisation and regulatory reforms promoted in the process of globalisation, such as the launch of the WTO system in 1995 and joining the 1996 OECD, accelerated the expansion of the private sector's role in fostering industries. In this process, the government steadily promoted R&D and human resource training support to strengthen industrial competitiveness by strengthening communication centred on associations such as semiconductors and automobiles. As a result, the Korean industry centred on manufacturing continued to grow. The total amount of exports increased from $172.3 billion in 2000 to $466.4 billion in 2010, and the total exports in 2018 before COVID-19 reached 604.9 billion, ranking sixth in the world (MOTIE and UNIPASS, 2019). In particular, the steel industry in Korea, where Pohang Iron and Steel was privatised, ranked 6th in steel production in 2020 and has global competitiveness.

Stern (2008) raised a critical position on market-oriented economic growth when looking at the lack of response to climate change, a global problem, as a market failure focused on the economic perspective. Nevertheless, the transition of Korea's industrial policy centred on the market drove the formation of an industrial structure centred on the manufacturing industry and strengthening industrial competitiveness. The industrial policy as a small government continued. However, the unprecedented COVID-19 situation has become a turning point in expanding the role of the government. The move was restricted by the global shutdown, accelerating the economic recession. The government's role in economic and economic aspects was expanded when quarantine became important

to prevent the spread of COVID-19. Fiscal expenditure, an essential role of the government, has been expanded through fiscal expansion policies, and the country's diplomatic role in moving entrepreneurs in the face of a global shutdown has been emphasised. In particular, through response to infectious diseases and support policies by small business owners and industries worldwide, dependence on the government, including the people and companies, was inevitably increased in overcoming the crisis caused by COVID-19. The Korean government was able to systematically respond to the COVID-19 crisis by expanding the role of the public sector. Through the implementation of social distancing and innovative COVID-19 diagnosis, the Korean infectious quarantine system has received excellent evaluation worldwide (Yonhapnews, 2021). In addition, despite the difficulty of moving between countries due to COVID-19, it showed its status as an industrial powerhouse, recording a record performance of $644.5 billion in exports in 2021 (MOTIE, 2022). As a result, the economic growth rate in 2020 was -0.9%, but due to the efforts of the government, the people, and companies, the economic growth rate in 2021 hit an 11-year high of 4%, overcoming the COVID-19 crisis in a short period (Hankyung, 2022). As such, the Korean government, aiming for a small government by promoting market-oriented industrial policies with the active acceptance of NPM, is overcoming the crisis as the role of the government expands due to COVID-19 in 2020.

2) Policy Proposal for Effective Climate Change Response and Digital Transformation

(1) Present continuous policy direction

In the case of the UK and Korea, the response to climate change

is actively being used as one of the future growth engines after COVID-19. The UK has established an industrial strategy through climate change response and has recently been promoting energy security at the same time. As the main policy direction of the industrial sector, technological innovation was prioritized and new industries such as the hydrogen economy were suggested as the main direction. In addition, for energy security, development of small reactors, expansion of new and renewable energy, development of new energy such as hydrogen, and improvement of energy efficiency were suggested. In addition, cooperation with developing countries is continuously presented through the general meeting of the parties to climate change internationally. In addition, partnerships and cooperation are continuously promoted through climate change policies and international conferences. As such, providing information to stakeholders and allowing them to participate through continuous presentation of the government's policy direction is an important part of the implementation of the policy.

(2) More choices for businesses and consumers

Investment in new technology development, financial support, and support for fostering new industries such as the hydrogen economy are actively being promoted not only by the UK but also by the Korean government. From the government's point of view, it is important not only to prepare support measures, but also to provide information that participants need. According to the Industrial Decarbonization Strategy announced by the UK, the policy aims to expand the choice of investors who need to find future growth engines such as companies or consumers who consume the

products. In order to get investors to choose low-carbon, the government use carbon prices as a tool to send clear market signals and clarify directions for supporting CCUS and hydrogen infrastructure deployments. In addition, in order to allow consumers to choose low carbon, it was decided to improve data transparency and propose standards for new low-carbon products. By creating demand for low-carbon business products and developing markets, it is expected to achieve the effect of supporting low-carbon manufacturers along with expanding consumer choice.

(3) Strengthening governance

In terms of strengthening the industry's competitiveness, it was confirmed that the policy window, COVID-19, played an important role in the government policy for responding to climate change and digital transformation through Kingdon's MSA. Through the strengthened goals and the expansion of the means of government policy, we can see that the role of government has been expanded. The role of the government has become important through the government's bold fiscal investment in response to climate change and digital transformation policies, which began with the "Korean New Deal" announced in July 2020. Since then, the "Basic Act on Carbon Neutrality and Green Growth" has been enacted to implement it along with the declaration of carbon neutrality, the "Industrial and Energy Carbon Neutrality Vision Strategy" has been announced, and the government's policy has been prepared to cope with climate change. In addition, regarding digital transformation, the Industrial Digital Transformation Promotion Act was enacted, and the Digital-based Industrial Innovation Growth Strategy was established. The government c. However, a market-oriented

industrial structure was formed under the small government stance after the government-led industrial development period. What are the directions for effective response to climate change and digital transformation in this situation?

The first thing to consider is companies that are the main agents of responding to climate change and digital transformation. The number of companies in Korea is 6,820,850 as of 2020. Among them, 3,272 are large companies, 5,220 are medium-sized companies, and 6,812,324 are small and medium-sized companies (KSIS, 2022). As of 2018, Korea's greenhouse gas emissions are 37% for conversion (energy), 36% for industry, 13% for transportation, and 7% for buildings, which require active participation from the industry to respond to climate change. The industry agrees with the need to promote carbon neutrality in an irresistible trend but said carbon reduction is a realistic survival problem for companies (MOTIE, 2021). In addition, the important thing for realising carbon neutrality is technology development, and the government is requested an active role. In addition, regarding digital transformation, SMEs emphasised the importance of the role of leading companies and governments due to the lack of capabilities such as technology and capital. As a result, it is necessary to promote policies that reflect corporate demand. Close links between the government and companies can reduce the cost of government-business transactions incurred in efficient policy coordination, that is, policy formation and implementation and effectively implement policies (Kim, 1996).

The second is the growth of civic consciousness. Civil society played a significant role in Korea's democratisation, and civic groups' activities and capabilities have greatly expanded since the 1990s (Lee, 2020). The scope of activities of civic groups, such as

realising economic justice, environmental protection, women's rights, and civic monitoring, has expanded and diversified (Im, 2006). In addition, according to the management information system for non-profit private organisations' public interest activities, the status of non-profit organisations registered in 2000 reached 15,385 in 2021 (MOIS, 2022). In establishing policies to cope with climate change, organisations advocating carbon neutrality proceeded with the emergency declaration of the climate crisis. They urged the National Assembly and the government to make policy decisions. To gain political support and secure the legitimacy of government policies, citizens must recognise the need for climate change response and digital transformation and accept changes resulting from policy implementation.

The third is the central government organisation. As discussed above, related central government organisations vary in responding to climate change and promoting digital transformation policies. In addition, when industrial development was supported by industry in the past, means and policy support were relatively simple. However, goals and targets have diversified as support for each function, such as technology innovation and workforce supply has changed. As a result, the central government has no choice but to be more directly connected to the policy-making process (Lim, 2008). Therefore, cooperation between ministries in charge became more important than anything else to implement effective policies.

The fourth is cooperation with the international community. In particular, responding to climate change is a task of the international community adopted by the Paris Agreement. Major countries such as the United States, the EU, and the United Kingdom are pushing for support policies to cope with climate

change. In the case of the United States, the "administrative order to solve the domestic and foreign climate crisis" was implemented in 2021, and the EU announced the "European Green Deal" in 2019 and is pushing for a "multilateral R&D cooperation program." In addition, the UK is pushing ahead with the announcement of the Industrial Decarbonization Strategy in 2021. To realise carbon neutrality, technological innovation in greenhouse gas emission industries such as steel, oil refining, and cement is essential (MOTIE, 2021). For example, in the case of steel, the development of hydrogen-reduced steel technology is underway instead of blast furnaces. Global cooperation and performance sharing are of paramount importance when there are no specific measures yet due to global issues in responding to climate change. In addition, active government efforts such as multilateral consultations are needed in the international community because they can directly affect domestic companies and industries, such as the digital tax ahead of implementation and the current carbon border adjustment tax being discussed.

COVID-19 has expanded the role of the government, and the role of the government in industrial policy has become essential due to the challenges of responding to climate change and digital transformation. However, now that the market economy is in place, it isn't easy to realise effective policies just by expanding the government's spending. Companies are located as economic agents, and civil society's influence on government policies has increased. In addition, the division of roles between governments has become complicated, and responding to climate change has become a problem not only for one country. As a result, stakeholder participation and collaboration, that is, governance, are essential. Governance has been formed through a network based on trust in

the government, businesses, and civil society, along with a new public management discussion emphasising small government and efficiency. However, even when the role of the government has expanded, it can play an essential role in effective policy implementation. The essence of governance lies in the reorganisation and new identity of actors to express the interdependence and solidarity of various social actors. When governance is consolidated, power and resources are distributed, so it is possible to achieve what is intended through cooperation with the other party (Yu and So, 2005). However, because participants are autonomous, it may weaken reforms rooted in challenges to dominance and competition (Rhodes, 1996). As a result, despite the expansion of the role of government spending for effective response to climate change and digital transformation, it is important to establish the governance, government - business - citizen (people) - the international community, and the government needs to form and implement policies through governance.

6. Conclusion

The Korean government, established in 1948, has achieved rapid growth since the 1960s despite the Korean War in 1950. In addition, in 1986, the democratic system was established through the citizen-centred democratisation movement. Amid these social changes, the Korean government ranked 23rd out of 64 countries in 2021 in The World Competitiveness Ranking released by the International Institute for Management Development (IMD). In particular, it has grown into a manufacturing industry-oriented country in the industrial sector, achieving 7th place in the world of exports in 2021. In the process, the role of the government has continued to change according to internal and external conditions, and the role of the government in industrial policy has also continued to change. In the past, fostering by industry, which the government led, has changed to market-oriented through democratisation and globalisation. In particular, with the active acceptance of NPM, the role of the government continues to decrease, especially in privatisation and deregulation, promoting marketisation in the industrial sector and expanding the role of the private sector. However, recently, COVID-19 has been a turning point in the stance of small government orientation.

In this report, I examined the changes in the role of the government, focusing on the literature review of new public management and the cases of the United Kingdom and Korea. In addition, by reviewing the Korean government's policies in responding to climate change and digital transformation tasks emphasised by COVID-19, I reviewed what is necessary for the government's role and effective response. To this end, Kingdon (1984)'s Multiple streams Approach, which is easy to analyse the

radical policy change process, was used to confirm the theoretical background of NPM, which aims for an efficient government, and the expansion of the role of the government through policy means. Through this, the following could be confirmed.

First, the NPM theory significantly influenced the Korean government's reform. The theoretical background of the new public management theory originated from the government's financial crisis due to excessive welfare spending by European countries in the 1970s. To overcome this, it was to improve the efficiency of the bureaucracy by introducing market principles and aiming for a small government. The IMF economic crisis in 1997 was behind the government's reform by actively accepting the theory of new public management in Korea. The Kim Dae-Jung government has streamlined public sector reform and spending to overcome the foreign exchange crisis. In addition, the privatisation of the public sector and regulatory reform were actively promoted to realise a small government while inducing a market economy and private-led growth. As such, it can be seen that Korea actively announced government reform according to the new public management theory against the backdrop of the country's economic crisis, similar to European countries in Europe. In the past, the inefficiency of the bureaucracy and the internal financial crisis caused by a closed structure have consequently promoted government reform, streamlined government functions, and contributed to the establishment of a market-oriented economic structure. In particular, it can be said that Korea's privatisation and regulatory reform have become a background for growing in response to the trend of the times by changing the government-led industrial structure to the private sector.

Second, COVID-19 was a significant turning point in the change in the role of the Korean government. Large and small global crises such as the 2008 U.S. subprime mortgage crisis and 2015 MERS continued to occur. However, the COVID-19 infectious disease in China in December 2019 was a significant event that persisted, causing a global shutdown, economic crisis, and daily changes, creating a situation in which the government's role was expanded. The government has strengthened its role in diplomacy, health and other areas by actively pushing for restrictions on movement between countries and quarantine. In addition, the government expanded public spending to stabilise the economic crisis and people's livelihoods brought by COVID-19 through the extra budget. In addition, the global shutdown caused by COVID-19 has shocked the global supply chain formed by globalisation progress, accelerating de-globalization such as national priority and expansion of protection trade. In this situation, the government's role has been strengthened by presenting tasks such as responding to climate change and digital transformation in attracting high-tech industries such as semiconductors and strengthening domestic industrial competitiveness. In particular, the response to climate change, which is pointed out as a failure of the market economy, has become a turning point that is highlighted by COVID-19. As such, the unprecedented situation caused by COVID-19 has led to structural changes in our society and the expansion of the government's role due to a new normal, not a short-term crisis.

Third, the Korean government expanded its role through climate change response and digital transformation policies being pursued to strengthen future industrial competitiveness. Government policy is an important role of the government, and government spending and economic regulation, which are policy measures, are the role of the

government. Typical examples are climate change response and digital transformation policies accelerated by the COVID-19 situation. According to Kingdon's Multiple stream approach, which analysed the case in which the two policies were promoted, climate change response and digital transformation were policy agendas raised even before COVID-19. In addition, to respond to this, the government was responding through mid- to long-term measures. However, reducing greenhouse gases in the industrial sector was considered to impact the national economy, and digital-related areas were not active in supporting the utilisation of the industrial sector. As a result, previously, the role was more meaningful for markets and companies. However, COVID-19, which has become a policy window along with political trends such as regime change and the number of seats in the National Assembly, has created a turning point for the government to play a leading role in responding to climate change and digital transformation. The Korean government actively promote climate change response and digital transformation policies when it announces the 2020 "Korean version of the New Deal" policy to overcome the crisis caused by COVID-19 and lead the global economy after COVID-19. In particular, the government declared 2050 carbon neutrality, drastically expanding the goal of reducing greenhouse gas in the industrial sector and promoting the use of data in the industrial sector by enacting the Digital Transformation Promotion Act. In addition to the announcement of follow-up government policies, it can be said that the role and function of the government have expanded by promoting budget expansion and legal system preparation.

Fourth, the case of responding to climate change in the UK shows that it is necessary to present continuous policy directions and expand the options of companies and consumers. The response to

climate change, which has emerged as a problem for the international community since COVID-19, can be a crisis and an opportunity to discover and foster future growth engines. In order to effectively promote policies in the newly challenging eco-friendly transformation, it is important to provide clear information to stakeholders by presenting continuous policy directions so that they can participate. In addition, it is necessary to allow companies and consumers to choose and participate, not unilateral support from the government. To this end, it seems necessary to actively reflect corporate demand and effectively explain policy measures when establishing policies, while preparing incentives for low-carbon products so that consumers can choose low-carbon products.

Finally, even if the role of the government is expanded, governance should be considered in the present, unlike in the past. In the past, the Korean government led the development of industries such as electronics, steel, and petrochemicals through individual industries. In line with the globalisation trend, such as the new public management theory and the launch of the WTO system, the Industrial Development Act, which integrated individual laws in 1999, was completely revised to the Industrial Development Act, and the government's role changed. Since then, the industry has grown around companies and formed associations by industry. In addition, public acceptance is an important factor in responding to climate change and promoting digital transformation. After democratisation, citizenship has grown in Korea, and civic groups are expanding their activities, especially in responding to climate change and monitoring personal information due to digital transformation. Above all, cooperation with ministries in charge of support measures such as technology, workforce, and budget was emphasised in the process of promoting policies. Collaboration with

the international community was also noted on global issues such as digital tax and carbon border adjustment tax. As such, collaboration with stakeholders has become an essential factor above all in the government's policy to respond to climate change and promote digital transformation. The government's role in expanding public spending and preparing systems such as deregulation needs to be expanded, while collaboration with companies, citizens, related ministries, and the international community needs to be emphasised more.

As such, the role and function of the Korean government caused changes due to internal and external factors. The public sector reform, brought about by the foreign exchange crisis, led to the transition to a market-oriented and private-led industrial structure through privatisation and deregulation of the public sector. In addition, the recent COVID-19 situation has experienced an unprecedented pandemic, emphasising the government's role in quarantine, overcoming the economic crisis, and global cooperation, and above all, the government's role in responding to climate change and promoting digital transformation, which emerged as COVID-19. Nevertheless, unlike in the past, considering the market economy and private-led industrial structure, growth of civic awareness, decentralisation of policy means, and globalisation, it can be seen that the operation of integrated governance is the most important factor in successful policy promotion.

< Bibliography >

4th Industrial Revolution Committee (4th IRC). (2017). People-centered 4th Industrial Revolution Response Plan for Innovative Growth. [Online]. Available at: https://www.4th-ir.go.kr/pressRelease/detail/5?category=report

An, Jae-Wook. (2014). Deregulation for Korea Economic Growth and Entrepreneurship. Review of Institution and Economics, 8(3), 159-180 Anon (2012) Chapter 1: The Study of Public Policy. In: Analyzing public policy [electronic resource] / Peter John. 2nd ed. Routledge, Abingdon, Oxon : pp. 1-16.

Bae, Jong-Yun.(2010). Efficiency and Limit of Kim Dae-jung Government's Organizational Reforms with the Idea of 'Small Government'. Korean Political Science Review, 44(4),73-95.

Baek, In-Soo. (2022). The direction and implications of digital transformation in major fields of national society in the post-COVID-19 era. The Journal of The Korean Institute of Communication Sciences, 39(2), 10-15.

Bank of Korea (BOK). (2002). Changes in economic structure and impact on our economy after COVID-19. Seoul: Bank of Korea

Bank of Korea. (2020). UK finances and prospects post COVID-19 pandemic [Online]. Available at: https://www.bok.or.kr/portal/bbs/P0002231/view.do?nttId=10061536&menuNo=200085

Cairney, P. & Jones, M.D. (2016) Kingdon's Multiple Streams

Approach: What Is the Empirical Impact of this Universal Theory? Policy studies journal. 44 (1), 37-58. doi:10.1111/psj.12111.

Carter, N. and Jacobs, M. (2014). EXPLAINING RADICAL POLICY CHANGE: THE CASE OF CLIMATE CHANGE AND ENERGY POLICY UNDER THE BRITISH LABOUR GOVERNMENT 2006-10. Public administration (London), 92 (1), pp.125-141. [Online]. Available at: doi:10.1111/padm.12046.

Chang, Hyunjoo.(2017).An Analysis of Domestic Research Applying the Multiple Streams Framework - Who Are Policy Entrepreneurs and How Does the Policy Window Open in Policy Change at the Central and Local Levels of Administration? -.The Korean Journal of Local Government Studies,21(2),379-403.

Cho, Dae-Hyung and Kim, Jung-Joo. (2020). The Impact of the COVID-19 on the Domestic Economy and Future Challenges. Humanities 21, vol.11 and no.6 pp.2597-2612

Cho, Kyung-Yeop and Lee, Tae-Gyu and Yoo, Jin-Sung and Kim, Yoon-Kyung and Lee, Seung-Seok and Lim, Dong-Won. (2020). Post Covid 19,, Prospects and Implications for Economic and Social Change, Korea Economic Research Institute.

Cho, Seong-Bong. (2012). Reform and Privatization of Public Enterprises. Korea Economic Research Institute, 2012(4), 6-57.

Choi, Hyun-Jin. (2022). Policies and Technical Trends of Carbon Neutrality. KIC NEWS , vol. 25,no. 2, pp. 1-7.

Chosun Ilbo. (2021). When the Earth heats up 1.09 degrees, the

Korean Peninsula rises 1.8 degrees... It was well over the global average (2021.10.06). [Online]. Available at: https://www.chosun.com/opinion/specialist_column/2021/10/06/33GUBM7TD5AJZD4F7APYW4JDHY/?utm_source=naver&utm_medium=referral&utm_campaign=naver-news

Climate Crisis Emergency Action (CCEA). (2020). Passed the National Assembly's resolution on the emergency declaration of climate crisis (2020.9.24), and now there is more than one. [Online]. Available at: http://climate-strike.kr/3359/

DesignDB. (2022). UK Economic and Industrial Outlook to 2022. [Online]. Available at: https://www.designdb.com/?menuno=1280&bbsno=7002&siteno=15&act=view&ztag=rO0ABXQAOTxjYWxsIHR5cGU9ImJvYXJkIiBubz0iOTg5IiBza2luPSJwaG90b19iYnNfMjAxOSI%2BPC9jYWxsPg%3D%3D#gsc.tab=0

Ononews. (2021). "Carbon Neutrality," said Choi Tae-won, chairman of the Korea Chamber of Commerce and Industry. Only when the government is active" (2021.10.09), [Online]. Available at: http://www.econonews.co.kr/news/articleView.html?idxno=219964

Fukuyama, F. (2004). The Imperative of State-building. Journal of Democracy, 15(2): 17-31

Greer, S. (2015). John W. Kingdon, Agendas, Alternatives, and Public Policies. In: The Oxford Handbook of Classics in Public Policy and Administration. Oxford University Press. [Online]. Available at: doi:10.1093/oxfordhb/9780199646135.013.18.

Ham, Shee-Chang. (1998). A Study On Privatization. Economic Policy Research, 4(0), 0-15.

Herweg, N., Zahariadis, N. and Zohlnhöfer, R. (2018). The Multiple Streams Framework: Foundations, Refinements, and Empirical Applications. In: Theories of the Policy Process. 4th ed. 1. Routledge. pp.17-53. [Online]. Available at: doi:10.4324/9780429494284-2.

Hood, C. (1991). A PUBLIC MANAGEMENT FOR ALL SEASONS? Public administration (London), 69 (1), pp.3-19. [Online]. Available at: doi:10.1111/j.1467-9299.1991.tb00779.x.

Im, Hyug-Baeg. (2006). Civil Society, Political Society, Democratic Responsibility. Korea-Japan Joint Research Series, 15(), 45-92.

International Energy Agency (IEA). (2020). Coal 2020 : Analysis and forecast to 2025. IEA, [Online]. Available at: Paris https://www.iea.org/reports/coal-2020

International Institute for Management Development (IMD). (2021). The world competitiveness. https://www.imd.org/centers/world-competitiveness-center/rankings/world-competitiveness/

International Newspaper. (2019). Korea's first commercialization of 5G, opened two hours ahead of the U.S. (2019.04.04). [Online]. Available at: http://www.kookje.co.kr/news2011/asp/newsbody.asp?code=0200&key=20190405.22014002079

Jang, No-Sun. (2004). Korean public administration and policy review. Research on Korean administration and policy, 2 (2), pp.25-42.

Jeong, Sol and Joo, Hye-Rin and Yoo, Seung-Ju and Son, Seon-hwa and Um, Young-ho and Yun, Na-ri. (2020). "Exploring the direction and scope of government innovation", National Policy Research, vol.34, no.4 pp.1-21. Available from: doi:10.17327/ippa.2020.34.4.001

Jeong, Sun-Tae and Yu, Jin and Choi Yeon-Hee. (2021). A Study on the Trend of Carbon Borders and Consistency with WTO Rules. Journal of Korean Business and Trade, 1(), 109-124.10.54523/jkbt.2011.1.1.109

Jin, In and Woo, Young-Jin and Park, Seung-Ho, and Cho Eun-Young. (2020). Economic Impact of COVID-19 Global Trend: Focusing on Real Economy and Financial Markets in Major Countries. National Assembly Budget Office, No. 15

Jung-Eui Hong and Dong-Myeong Lee. 2022, "A Study on the Changes in International Competitiveness of the Steel Industry of Major Countries", Business History Study, vol.37, no.1 pp.85-110. Available from: doi:10.22629/kabh.2022.37.1.004

Jung, Young-Tae. (1998), Evaluation of the political and administrative reforms of the Kim Young-sam administration. HWANGHAE REVIEW,18(), 213-217

Kang, Min and Cho, Dong-Sung and Ahn, Se-Yeon. (2009). Privatization of public enterprises and corporate governance. Korea

Business Review, 13(1), 135-165.

Kettl, D. F. (2000). The global public management revolution : a report on the transformation of governance / Donald F. Kettl. Washington, D.C.: Brookings Institution Press.

Kim, Hyo-Seong. (1995). Oil price liberalization and petroleum industry liberalization promotion plan. Petroleum Association Report, (), pp.38-47

Kim, Jae-Hong. (1995). Economic Policy Analysis of Deregulation and Privatization, Korea Economic Research Institute, () 11, 79~104

Kim, Jeong-Sik. (2002). An Assignment of Korean Economy after Overcoming the IMF Supervision.Journal of the National Congress of Trade Scholars, 105-113.

Kim, Jun-Ki. (2007). Changes in Government Function: Focusing on Policy Means, Proceedings of the Fall Conference of the Korean Public Administration Society, vol. 2007, no. 0, pp. 1-26.

Kim, Jung-Youl. (1996). Issues and Alternatives of Industrial Policy in Transition Period. The Journal of Labor Studies, 12(), 193-227.

Kim, Kyung-Han. (2005). The Study on the Evaluation of the Korean Government Reform Performance: Focusing to the Introduction of New Management Programs in the Dae Jung Kim's Administration. Korean society and public administration, 15(4),1-22 .

Kim, Sang-Gon. (2003). An Evalluation of the Privatization Policy of

Kim Dae Jung Government and an Opinion on the Energy Industry. Social Economic Review, 20(), 7-38.

Kim, Seong-Su. (2007). Theory of Small Government: A Government-Market Relational Approach.Proceedings of the Seoul Association for Public Administration Conference,(),p.75-95.

Kim, Tae-Yun. (2003). An Evaluation of Regulatory Reform of the Kim Dae-Jung Administration: with the Focus on the Regulatory Reform Governance. Regulatory Research, 12(1), 3-35.

Kim, Young-Rae. (2007). Redefining democracy and civil society values. NGO Research, 5(1): 1-25

Kingdon, J. W. (2013). Agendas, alternatives, and public policies. Pearson Education.

Kingdon, John. (1984). Agendas, Alternatives and Public Policies, New York: Harper Collins.

KISTEP. (2020). U.S., 'Social Distancing' Digital Policy Trends. Science Technology & ICT Policy Technology Trends, No.165.

Ko, Jae-Kyung. (2020). COVID-19 Lessons and Prospects for Responding to the Climate Crisis. Policy Studies, (), 285-315.

Koo, Choon-Kwon. (2012). Discourse, Conflict, and Consensus on Privatization. The Korean Political Science Association Proceedings, 46(4), p.219-246

Korea Broadcasting and Communications Agency (KBCA). (2022).

Background and prospect of introducing digital tax. Media Issues & Trends, (48), 69-77.

Korea Creative Economy Research Network (KCERN). (2016). Artificial intelligence and the Fourth Industrial Revolution. Forum Report, (), 1-182.

Korea Customs Service (KCS). (2022). Import and Export Statistics. [Online]. Available at: https://unipass.customs.go.kr/ets/

Kwon, Ki-Hyun. (2007). Directions and Tasks for Government Reform: : Government Innovation, Administrative Reform, and Governance. Journal of Governance Studies, 2(2), pp.31-59.

KOTRA. (2021). UK industry overview. [Online]. Available at: https://dream.kotra.or.kr/kotranews/cms/news/actionKotraBoardDetail.do?SITE_NO=3&MENU_ID=200&CONTENTS_NO=1&bbsGbn=403&bbsSn=403&pNttSn=188957

Lee, Deuk-Soon, Kim, Mun-Sung.(2017).Analysis of Policy Formation Process of Expressway : Focusing on the Case of Seoul-Sejong Expressway.Journal of Transport Research,24(4),25-44.

Lee, Dong-yoon. (2020). Democratic Lessons in East Asian Countries: The Necessity of Education for Democratic Citizenship. Global Education Research, vol.12, no.2 pp.85-113. Available from: doi:http://dx.doi.org/10.19037/agse.12.2.04

Lee, E. W. Y. and Haque, M. S. (2006). The New Public Management Reform and Governance in Asian NICs: A Comparison of Hong Kong and Singapore. Governance (Oxford), 19 (4),

pp.605-626. [Online]. Available at: doi:10.1111/j.1468-0491.2006.00330.x

Lee, Han-Seop. (2022). Increase of Extreme Events and Following Changes in the Worldwide Forest Ecosystem. Journal of Geography(Jirihak Nonchong), vol.68, pp.61-70.

Lee, Hye-Kyung. (2021). Implementation Status and Domestic Implications of the UK 'Climate Change Act', National Assembly Research Service, 01

Lee, Ju-Seon. (2007). Evaluation of Privatization Policy after the Foreign Exchange Crisis. Journal of the Korean Finance Society, 2007(3), 1-12.

Lee, Seon-Woo. (2017).[CHAPTER 04] Future government role change and central government function re-creation and advancement policy series, (), 203-265.

Lee, Tong-Soo. (2000).An Examination into Issues on the New Public Management.Korean Journal of Social Science,19(2),141-159.

Lee, Yeon-Ho. (1998). The Role of the State in Economic Liberalization: The Politics of Economic Regulation. Korean Political Science Proceedings, 32(3), 77-94.

Lim, Euy-Young. (2014). H.A. Simon's Bounded Rationality and Public Administration. Administrative debate, 52 (2), pp.1-35.

Lim, Hae-Ran. (2008). Changes of Industrial Policy and Governance in Korea. Korean Politics Study, 17(2), pp.1-32.

M., WC, & Sabatier, PA (eds) 2017, Theories of the Policy Process, Taylor & Francis Group, Milton. Available from: ProQuest Ebook Central. [26 June 2022].

McKinsey. (2020). addressing climate change in a past-Pandemic world. [Online]. Available at: https://www.mckinsey.com/business-functions/sustainability/our-insights/addressing-climate-change-in-a-post-pandemic-world

Ministry of Economy and Finance (MOEF). (1999). The results of privatization and management innovation of state-owned enterprises. [Online]. Available at: https://www.moef.go.kr/com/synap/synapView.do;jsessionid=tmuq5DbOHqjRQ+b95KMUE+lq.node10?atchFileId=ATCH_OLD_00000220317&fileSn=350489

Ministry of Economy and Finance (MOEF). (2019). 2020 Budget Highlights. [Online]. Available at: https://www.moef.go.kr/nw/nes/detailNesDtaView.do?searchBbsId1=MOSFBBS_000000000028&searchNttId1=MOSF_000000000031126&menuNo=4010100

Ministry of Economy and Finance (MOEF). (2020). 2050 Carbon Neutralization Strategy, [Online]. Available at: https://www.moef.go.kr/nw/nes/detailNesDtaView.do?menuNo=4010100&searchNttId1=MOSF_000000000052647&searchBbsId1=MOSFBBS_000000000028

Ministry of Economy and Finance (MOEF). (2020). Announces comprehensive plan for 2020 Korean version of New Deal. [Online]. Available at:

https://www.moef.go.kr/nw/nes/detailNesDtaView.do?searchBbsId1=MOSFBBS_000000000028&searchNttId1=MOSF_000000000040637&menuNo=4010100

Ministry of Economy and Finance (MOEF). (2020). Overcoming COVID-19, Leading Country 2021 Budget and National Fiscal Management Plan 2020-2014. [Online]. Available at: https://www.moef.go.kr/nw/nes/detailNesDtaView.do?searchBbsId1=MOSFBBS_000000000028&searchNttId1=MOSF_000000000045123&menuNo=4010100

Ministry of Economy and Finance (MOEF). (2020). Press Release on the Results of the First Emergency Economic Conference (2020.03.19). [Online]. Available at: https://www.moef.go.kr/nw/nes/detailNesDtaView.do?searchBbsId1=MOSFBBS_000000000028&searchNttId1=MOSF_000000000032775&menuNo=4010100

Ministry of Economy and Finance (MOEF). (2021). 2050 Carbon Neutral Promotion Strategy. [Online]. Available at: https://www.moef.go.kr/nw/nes/detailNesDtaView.do;jsessionid=c1MpS35T04lWDgutTppLr2ug.node10?searchBbsId1=MOSFBBS=000000000028&searchNttttId1=MOSF_000047&menu

Ministry of Economy and Finance (MOEF). (2021). Confirms 2022 budget. [Online]. Available at: https://www.moef.go.kr/nw/nes/detailNesDtaView.do?searchBbsId1=MOSFBBS_000000000028&searchNttId1=MOSF_000000000057618&menuNo=4010100

Ministry of Environment (MOE). (2019). 2nd Framework Plan for

Climate Change Response. [Online]. Available at: https://www.me.go.kr/home/web/policy_data/read.do?menuId=10259&seq=7394

Ministry of Foreign Affairs (MOFA). (2021). Submitted to the U.N. Office for Climate Change in 2030 NDC (23.12.2021). [Online]. Available at: https://www.mofa.go.kr/www/brd/m_4080/view.do?seq=371966

Ministry of Science and ICT (MSIT). (2016). Establishing a mid- to long-term national strategy for the advent of an intelligent information society. [Online]. Available at: https://www.msit.go.kr/bbs/view.do?sCode=user&mId=113&mPid=112&pageIndex=1&bbsSeqNo=94&nttSeqNo=1321678&searchOpt=ALL&searchTxt=%EC%A7%80%EB%8A%A5%EC%A0%95%EB%B3%B4%EC%82%AC%ED%9A%8C+%EB%8F%84%EB%9E%98%EC%97%90+%EB%8C%80%EB%B9%84%ED%95%9C+%EC%A4%91%EC%9E%A5%EA%B8%B0+%EA%B5%AD%EA%B0%80%EC%A0%84%EB%9E%B5+%EC%88%98%EB%A6%BD

Ministry of Science and ICT (MSIT). (2016). Establishing a mid- to long-term national strategy for the advent of an intelligent information society. [Online]. Available at: https://www.msit.go.kr/bbs/view.do?sCode=user&mId=113&mPid=112&pageIndex=1&bbsSeqNo=94&nttSeqNo=1321678&searchOpt=ALL&searchTxt=%EC%A7%80%EB%8A%A5%EC%A0%95%EB%B3%B4%EC%82%AC%ED%9A%8C+%EB%8F%84%EB%9E%98%EC%97%90+%EB%8C%80%EB%B9%84%ED%95%9C+%EC%A4%91%EC%9E%A5%EA%B8%B0+%EA%B5%AD%EA%B0%80%EC%A0%84%EB%9E%B5+%EC%88%98%EB%A6%BD

Ministry of the Interior and Safety (MOIS). (2021). Public Activity Support (NPO) system. [Online]. Available at: https://npas.mois.go.kr/nsbms/hmp/nfvnzBsisStat/nfvnzRegSituStat/nfvnzRegSituStat.do

Ministry of Trade, Industry and Energy (MOTIE). (1999), Amendment of the Industrial Development Act 1986 to the Industrial Structure Advancement Act. [Online]. Available at: http://www.motie.go.kr/motie/ne/presse/press2/bbs/bbsView.do?bbs_seq_n=880&bbs_cd_n=81&currentPage=1&search_key_n=title_v&cate_n=1&dept_v=&search_val_v=%EA%B3%B5%EC%97%85%EB%B0%9C%EC%A0%84%EB%B2%95

Ministry of Trade, Industry and Energy (MOTIE). (2019). 2018 Import and Export Performance and Evaluation. [Online]. Available at: http://www.motie.go.kr/motie/ne/presse/press2/bbs/bbsView.do?bbs_seq_n=161221&bbs_cd_n=81&currentPage=11&search_key_n=title_v&cate_n=&dept_v =&search_val_v=2018

Ministry of Trade, Industry and Energy (MOTIE). (2020). Announces Digital-Based Industry Innovation Growth Strategy, [Online]. Available at: http://www.motie.go.kr/motie/ne/presse/press2/bbs/bbsView.do?bbs_seq_n=163231&bbs_cd_n=81&currentPage=1&search_key_n=user_nm_v&cate_n=&dept_v=&search_val_v=%EC%B5%9C%ED%83%9C%EC%A4%80

Ministry of Trade, Industry and Energy (MOTIE). (2020). Announces Digital-Based Industry Innovation Growth Strategy. [Online]. Available at:

http://www.motie.go.kr/motie/ne/presse/press2/bbs/bbsView.do?bbs_seq_n=163231&bbs_cd_n=81&currentPage=1&search_key_n=user_nm_v&cate_n=1&dept_v=&search_val_v=%EC%B5%9C%ED%83%9C%EC%A4%80

Ministry of Trade, Industry and Energy (MOTIE). (2020). Digital-based Industry Innovation Growth Strategy. [Online]. Available at: http://www.motie.go.kr/motie/ne/presse/press2/bbs/bbsView.do?bbs_seq_n=163231&bbs_cd_n=81&currentPage=1&search_key_n=user_nm_v&cate_n=&dept_v=&search_val_v=%EC%B5%9C%ED%83%9C%EC%A4%80

Ministry of Trade, Industry and Energy (MOTIE). (2020). Lead the digital transformation of exports to become a trading power. [Online]. Available at: http://www.motie.go.kr/motie/ne/presse/press2/bbs/bbsView.do?bbs_seq_n=163501&bbs_cd_n=81&currentPage=21&search_key_n=mgr_dept_nm_v&cate_n=&dept_v=&search_val_v=%EB%AC%B4%EC%97%AD%EC%A0%95%EC%B1%85%EA%B3%BC

Ministry of Trade, Industry and Energy (MOTIE). (2021). Decided by the State Council on the Proclamation of the Industrial Digital Transformation Act. [Online]. Available at: http://www.motie.go.kr/motie/ne/presse/press2/bbs/bbsView.do?bbs_seq_n=165086&bbs_cd_n=81&currentPage=1&search_key_n=title_v&cate_n=&dept_v=&search_val_v=%EB%94%94%EC%A7%80%ED%84%B8%20%EC%A0%84%ED%99%98

Ministry of Trade, Industry and Energy (MOTIE). (2021). Industrial/Energy Carbon-neutral Transformation Vision and

Strategy. [Online]. Available at: http://www.motie.go.kr/motie/ne/presse/press2/bbs/bbsView.do?bbs_seq_n=163231&bbs_cd_n=81&currentPage=1&search_key_n=user_nm_v&cate_n=&dept_v=&search_val_v=%EC%B5%9C%ED%83%9C%EC%A4%80http://www.motie.go.kr/motie/ne/presse/press2/bbs/bbsView.do?bbs_seq_n=164989&bbs_cd_n=81&currentPage=1&search_key_n=user_nm_v&cate_n=&dept_v=&search_val_v=%EC%A1%B0%EC%9A%B0%EC%8B%A0

Ministry of Trade, Industry and Energy (MOTIE). (2021). Vision and Strategies for a Great Transition to Carbon Neutrality in Industry and Energy. [Online]. Available at: http://www.motie.go.kr/motie/ne/presse/press2/bbs/bbsView.do?bbs_seq_n=163231&bbs_cd_n=81&currentPage=1&search_key_n=user_nm_v&cate_n=&dept_v=&search_val_v=%EC%B5%9C%ED%83%9C%EC%A4%80http://www.motie.go.kr/motie/ne/presse/press2/bbs/bbsView.do?bbs_seq_n=164989&bbs_cd_n=81&currentPage=1&search_key_n=user_nm_v&cate_n=&dept_v=&search_val_v=%EC%A1%B0%EC%9A%B0%EC%8B%A0

Ministry of Trade, Industry and Energy (MOTIE). (2021). Vision and Strategies for a Great Transition to Carbon Neutrality in Industry and Energy. [Online]. Available at: http://www.motie.go.kr/motie/ne/presse/press2/bbs/bbsView.do?bbs_seq_n=163231&bbs_cd_n=81&currentPage=1&search_key_n=user_nm_v&cate_n=&dept_v=&search_val_v=%EC%B5%9C%ED%83%9C%EC%A4%80http://www.motie.go.kr/motie/ne/presse/press2/bbs/bbsView.do?bbs_seq_n=164989&bbs_cd_n=81&currentPage=1&search_key_n=user_nm_v&cate_n=&dept_v=&search_val_v=%EC%A1%B0%EC%9A%B0%

EC%8B%A0

Ministry of Trade, Industry and Energy (MOTIE). (2022). MOTIE Launches 'Industrial Digital Transformation Promotion Team. [Online]. Available at: http://www.motie.go.kr/motie/ne/presse/press2/bbs/bbsView.do?
Ministry of Trade, Industry and Energy, December 2022, 2021 and annual import and export trends, http://www.motie.go.kr/motie/ne/presse/press2/bbs/bbsView.do?bbs_seq_n=165108&bbs_cd_n=81&currentPage=1&search_key_n=title_v&cate_n =&dept_v=&search_val_v=2021%EB%85%84

Moon, Jin-young and Na, Seung-kwon and Lee, Sung-hee and Kim Eun-mi. (2020). Response and Implications of the International Community Related to Green New Deal. Today's World Economy, 2020(1), 1-21.

Munhwa Ilbo. (2020). 19 New Trends in the Post-COVID-19 Era. [Online]. Available at: http://www.munhwa.com/news/view.html?no=2020050401031442000001

National Policy Advisory Committee (NPAC). (2017). the Moon Jae Inn government's five-year plan for state administration and the top 100 state affairs, [Online]. Available at: https://www.korea.kr/archive/expDocView.do?docId=37595

Office for Government Policy Coordination, Prime Minister's Severtariat (OPM). (2016). First Framework Programme on Climate Change. [Online]. Available at: https://www.opm.go.kr/opm/news/press-release.do?mode=view&articleNo=142803&article.offset=0&articleLimit=10&srSearchVal=%EC%8B%

A0%EA%B8%B0%ED%9B%84%EC%B2%B4%EC%A0%9C+%EC%B6%9C%EB%B2%94%EC%97%90+%EB%94%B0%EB%9D%BC

Oh, Young-Min 2014, Directions and Policy Tasks for Successful Reform in the Public Sector, Korea Institute of Taxation and Finance, 215 (0), p.29-49

Oh, Young-Min and Park, No-Wook Park and Won, Jong-Hak and Ha, Yeon-Seop and Lee, Hye-Young and Jo Yun-Jik. (2015). Evaluation of New Public Management Theory and Policy Implications, Korea Institute of Taxation and Finance, 2014 (0), p.149~158

Oh, Seung-Eun. (2006). My approach to governance. Yonsei Administration General General, 29, pp.47-75.

Organisation for Economic Co-operation and Development (OECD). (2022). OECD Economic Outlook, Volume 2022 Issue 1. OECD Publishing, Paris, [Online]. Available at: https://doi.org/10.1787/62d0ca31-en.

Park, Kwang-Kook, Kim-Jungin, 2020, 'The revisited government-citizenship relationship in the post-COVID-19 period', Korean Public Administration Review, vol. 54,no. 3, pp. 1-30.

Park, Sang-Young. (2021). The Changing Pattern of Political Participation in the Era of the Fourth Industrial Revolution and Its Implications for Democratic Citizenship Education. Research in Social Studies Education, 28(2), 1-15

Parsons, D. W., & Leftwich, Adrian provenance. (1995). Public

policy: an introduction to the theory and practice of policy analysis / Wayne Parsons. Cheltenham: Edward Elgar.

Pheko, M. M. (2013). "Privatization of Public Enterprises in Emerging Economies: Organizational Development (OD) Perspectives." International Journal of Business and Management 8(20): 25-35.

Rajagopalan, N. and Rasheed, A. M. A. (1995). Incremental Models of Policy Formulation and Non-incremental Changes: Critical Review and Synthesis. Received 7 October 1993 Revised May 1994. British journal of management, 6 (4), pp.289-302. [Online]. Available at: doi:10.1111/j.1467-8551.1995.tb00101.x.

Rhodes, R. A. W. (1996). The New Governance: Governing without Government. Political Studies, 44(4), 652-667. [Online]. Available at: https://doi.org/10.1111/j.1467-9248.1996.tb01747.x

Salamon, Lester M. (2002). The Tools of Government: Introduction", Oxford Press.

Satya Nadella. (2020). We've seen two years' worth of digital transformation in two months. [Online]. Available at: https://www.microsoft.com/en-us/microsoft-365/blog/2020/04/30/2-years-digital-transformation-2-months

Shin, Hee-Young. (2003). Critical Study on New Public Management Theory: A Critical Realist Approach. Government Studies, vol.9, no.1 pp.4-119.

Shin, Youn-Chang. (2011). An Exploratory Comparative Study on

the Administrative Reform of Youngsam Kim s·Daejung Kim s·Muhyeon Ro s Government, 15(1), 233-254.

Simon, H. A. (1957). Models of man: social and rational ; mathematical essays on rational human behavior in a social setting. New York: Wiley.

Statistics Korea (SK). (2022). Koean Statistical Information service. [Online]. Available at: https://kosis.kr/statHtml/statHtml.do?tblId=DT_1BD1022&orgId=101&language=en&conn_path=&vw_cd=&list_id=

Stern, N. (2008). The Economics of Climate Change. The American Economic Review, 98(2), 1-37. https://doi.org/10.1257/aer.98.2.1

Stoker, G. (2019). Can the governance paradigm survive the rise of populism?, Policy & Politics, 47(1), 3-18. Retrieved May 29, 2023, from https://doi.org/10.1332/030557318X15333033030897

Tan, C. H. et al. (2021). The Influence of COVID-19 on Global CO2 Emissions and Climate Change: A Perspective from Malaysia. Sustainability (Basel, Switzerland), 13 (15), p.8461. [Online]. Available at: doi:10.3390/su13158461.

Tanzi, V. (2020). Advanced introduction to public finance / Vito Tanzi. Cheltenham: Edward Elgar Publishing.

The 2021 United Nations Climate Change Conference (COP 26). (2021). The Glasgow climate pact. [Online]. Available at: https://ukcop26.org/wp-content/uploads/2021/11/COP26-Presidency-Outcomes-The-Climate-Pact.pdf

The Economist. (2021). The world is entering a new ear of big government. [Online]. Available at: https://www.economist.com/leaders/2021/11/20/the-world-is-entering-a-new-era-of-big-government

The Korean economy. (2022). Economic growth rate of 4.% last year... Highest in 11 years (202.01.05) through Corona. [Online]. Available at: https://www.hankyung.com/economy/article/2022012516061

Tobin IM. (2010). A Critical Review of New Public Management Styled Reforms Experimented in Korea. KOREAN SOCIETY AND PUBLIC ADMINISTRACTION,21(1),1-27.

Turner, M. (2002). CHOOSING ITEMS FROM THE MENU: NEW PUBLIC MANAGEMENT IN SOUTHEAST ASIA. International journal of public administration, 25 (12), pp.1493-1512. [Online]. Available at: doi:10.1081/PAD-120014258.

United Nations (UN). (2022). For a livable climate: Net-zero commitments must be backed by credible action. [Online]. Available at: https://www.un.org/en/climatechange/net-zero-coalition

UK Climate Change Committee. (2023). Climate Change Committee. [Online]. Available at: https://www.theccc.org.uk/

UK Government. (2021). Build Back Better: our plan for growth. [Online]. Available at: https://www.gov.uk/government/publications/build-back-better-our-plan-for-growth/build-back-better-our-plan-for-growth-html

UK Government. (2021). Digitalizing our energy system for net zero. [Online]. Available at: https://www.gov.uk/government/publications/digitalising-our-energy-system-for-net-zero-strategy-and-action-plan

UK Government. (2021). Industrial decarboniztion strategy. [Online]. Available at: https://www.gov.uk/government/publications/industrial-decarbonisation-strategy

UK Government. (2021). Zero Strategy: Build Back Greener. [Online]. Available at: https://www.gov.uk/government/publications/net-zero-strategy
UK Government. (2023). Powering up Britain. [Online]. Available at: https://www.gov.uk/government/publications/powering-up-britain/powering-up-britain

UK Office for National Statistics. (2023). UK GDP. [Online]. Available at: [Online]. Available at: https://www.theccc.org.uk/

World Health Organization (WHO). (2020). WHO Director-General's opening remarks at the media briefing on COVID-19 - 22 April 2020. [Online]. Available at: https://www.who.int/director-general/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19--22-april-2020

World Health Organization (WHO). (2022). Weekly epidemiological update on COVID-19 - 6 July 2022. [Online]. Available at: https://www.who.int/publications/m/item/weekly-epidemiological-upda

te-on-covid-19---6-july-2022

Yang, Seung-il and Han, Jong-hee. (2011). The formation, enforcement, and policy object of this policy through MSF: Focusing on the process of change in private school policy of the participatory government. Korea Administrative Research, 20(3), 35-62.

Yonhap News. (2021). World Leaders "K-Defense Prevention Number One(2021.6.19). [Online]. Available at: https://www.ytn.co.kr/_ln/0101_202106191304062383

Yoo, Jae-Won and So, Sun-Chang. (2005). Government or Governance? Hierarchical or Network?. The Korean Journal of Public Administration, vol.39, no.1 pp.41-63.

Yoo, Seung-Hwan and Ahn, Se-Hwa. (2021). The Double Whammy of the US-China Trade War and the COVID-19 Pandemic. The Journal of Eurasian Studies, 18(3), 139-161

Yoon, Soon-Jin. (2021). Korea's 2050 Carbon Neutral Scenario Contents and Tasks, Korea Energy Economics Institute, pp.18-32