Abstract
This article aims to contribute to discussions held by the academic community that has extensively researched the EU’s green transition. The author underlines that a transdisciplinary approach involving legal, economic, and political tools provide a comprehensive cross-fertilisation methodology. The article observes implications related to EU green policies and public management instruments from two perspectives: the broadening of green transition to socio economic dimensions; and the role of government intervention in economic and green business development to illustrate examples of relevant practices in the EU. The author argues that such a methodological approach can help one to assess the actions and measures related to the green economic and business development trends that require societal support as well as the improvement of economic efficiency at the EU and national level. This contribution offers insights into the concept of green economic transitions and innovation as well as the impact of public services focused on societal change. The article concludes that a decision-making process that is based on a cross-fertilisation approach allows the implementation of green policies in national economies in the most effective manner and, in turn, provides welfare effects due to the enhancement of public administration services in their coordinated actions with entrepreneurial activities and business investments. On a wider regional scale, government/private business green partnership represents a tool that inevitably helps increase the environmental and green competitiveness of the EU and its Member States.

Keywords: Green Policies, Public Management, Cross-Fertilisation, Green Transformation

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Introduction

In contemporary times, multiple crises crossing geo-political security, along with the economic, social, public health, and environmental realms, have renewed the incentives for harmonised policy responses in the EU to support societal transformations for sustainability. In the context of geopolitical crises and economic turmoil, strategies related to decarbonising the EU economy have been debated in talks on the European Green Deal (EGD), a so-called “green growth” strategy. Additionally, the crises of skyrocketing energy prices and insecurity of supply due to the Russian/Ukrainian war have put the energy transition at the top of the EU’s priorities (RePowerEU, 2022). Considering the varying capacities of the EU Member States to respond to the short-term and longer-term economic and environmental difficulties, concerns towards the transition of green governance, green entrepreneurship, and innovation as well as the aforementioned government/business partnership are of prime importance.

The European Commission proposes a transformation of the EU economy and society in order to meet climate ambitions. In 2021, the European Commission adopted a set of proposals to make the EU’s climate, energy, transport, and taxation policies fit for reducing net greenhouse gas emissions by at least 55% by 2030 as compared to 1990 levels. Achieving such emission reductions in the next decade is crucial to Europe becoming the world’s first climate-neutral continent by 2050 and to making the EGD a reality (European Green Deal, 2021). However, a “green growth” debate is taking place in a generalised setting. According to Frans Timmermans, the EU’s climate chief, green development “is going to be a long and difficult journey, and the COP27 deal still needs a tremendous amount of work”. The achievement of EU Green Policy objectives will be determined by a combination of dynamics and synergies between public management strategies and instruments that are capable of being effective in implementing public policy with adequate management. Overall, the transition process to green growth is assumed to be largely technocratic and has a strong impact on the decision-making process and any foreseen results achieved by governmental and private business policies. EU institutions have been instrumental in crafting policy packages for the EGD’s implementation, which resulted, as was stressed in a European Parliament study, in a change in thinking: “With this shift in thinking must come a shift in how we govern societies and implement solutions to these global challenges” (European Parliament, 2019, p. 12). Following this notion, the author supports the idea of applying a transdisciplinary
approach that helps the process of accomplishing desired changes in green transitions by involving legal, economic, and political tools that compose a comprehensive cross-fertilisation methodology. Furthermore, appropriate governance is seen as a precondition for achieving goals in creating and maintaining effective, competitive, and attractive instruments to support the implementation of the above-mentioned societal changes.

This article will examine the opportunities and challenges in the collaborative engagement between the respective actors and communities of practice in facilitation of the cross-fertilisation of policies and instruments to reach the ambitions of the EGD. The cross-fertilisation approach allows for the implementation of green policies in national economies in the most effective manner and, in turn, provides social welfare effects due to the resultant enhancement in public administration services in their coordinated actions with business investments and entrepreneurial activities. The cross-fertilisation approach on a large scale applies multi-and-inter-disciplinary knowledge and new technologies. Moreover, cross-fertilisation refers to the interdisciplinary combinations of different knowledge and technologies, generating extensive technological opportunities in terms of new-product performance or innovative entrepreneurial performance, or a new decision-making approach in governmental functionality. The most frequently expressed descriptions of the multi-and-inter-disciplinary are the following: the use and combination of different knowledge and skills; the application of innovative methods in problem-solving; a problem-oriented approach, etc.; and, additionally, two main dimensions can be identified in the forms of the multi-disciplinary and the inter-disciplinarity (Muravska, Ozolina, 2011, p. 67). Interdisciplinarity could become a new parameter of competition between national economies in approaching green growth. In addition, on a wider regional scale, the implementation of green policies and the orientation of government towards efficient functionality along with government/private partnership represents a tool that inevitably helps increase the environmental competitiveness of the EU and its Member States.

**Green Policies Orientation and the Concept of Environmentally Responsible Governmental and Business Strategies**

Increasingly, environmental issues are causing serious threats to ecology, to human beings, and to economic growth. Nowadays, governments and businesses focus on more sustainable production and
integrating sustainable processes at the core of their business activities. Studies suggest that Green Policy orientation has emerged as a core concept in the field of entrepreneurship (Lumpkin, Pidduck, 2021, p. 20), and resulted from cooperation between businesses and governments. In this context, in attaining environmental, economic, and social performance of businesses and business and government partnership, Green Policy orientation and/or sustainable economic performance are considered as sustainable competitive advantages (Afum et al., 2021, p. 170).

For many businesses entities, to enhance their capabilities and increase competitiveness is to perform towards the initiation of green ventures and the improvement of business and sustainability performance. The transition to a green economy is a dominant part of the EU’s economic development, and the European Green Deal that strives to transform the EU into a climate neutral, resource efficient economy by 2050 (European Commission, 2019) has placed green economy in the focus of attention of all national governments of the EU. The implementation of the EGD will provide new opportunities for innovation, investment, and jobs.

Green entrepreneurs and green businesses are recognised as vital push factors to foster transitions to a green economy. Green entrepreneurs, in implementing their business strategies, aim at reconciling tensions between business activities and environmental objectives in a contrast to entrepreneurs operating under the “business as usual” umbrella (O’Neill, Gibbs, 2016, p. 1730). An essential starting point governing green entrepreneurs is the so-called ‘green growth’ paradigm. In research studies, green growth is primarily associated with climate stabilisation as an accelerator for innovation, investment, and economic growth and is related to political activities on national and regional levels (Buch-Hansen, Carstensen, 2021, p. 310). The concept of green innovation was first proposed already in 1996 (Fussler, James, 1996, p. 150) to denote improvements and innovations in product processes that enhance the environmental performance of firms. In addition to this, Borghesi et al. (2015, p. 675) refer to green innovation as processes of the use of innovative resources that may reduce the cost of production and improve a company’s performance. In studies that are relevant to green innovations (Hadjimanolis, 2020, p. 65), the importance of innovation is attached to the economic, environmental, and social performance of a company, which, in turn, could enhance the strength and competitiveness of business entities and organisations.

Entrepreneurship plays an important role in delivering more radical green innovations that challenge existing firms and business models.
However, the cornerstone of the process is a well-organised government that applies environmentally-responsible business strategies. Green entrepreneurship is a system that reflects a company’s strategic actions to accelerate green innovation and improve sustainable business performance (i.e., that of the environmental, economic, and social). Green entrepreneurship leads to green innovation, which sequent to three variables, which include “green social performance”, “green economic performance”, and “green environmental performance”, as illustrated in the scheme below.

**Scheme 1. Green Policies’ System**

Source: the author’s own construction based on a literature review.

It is widely acknowledged that green policies are enhancing and contributing to the sustainability performance of the demand and supply sides. As a result, there is a need to pay close attention to development of internal environments within national economies and external environments determined by the implementation of Sustainable Development Goals (SDGs) internationally.

Green policies need the creation of the relevant economic and business environment and green growth, via good governance, fair competition, and an improvement of access to finance, which remains one of a major constraints for the facilitation of the transition to green growth and new, green businesses. These targets can alleviate problems in adopting green innovations. Furthermore, green policies can enable
businesses to participate in cooperation with a government in knowledge networks, and strengthen skills that can lead to innovation that are fundamental in the green transition. A framework for environmentally-responsible business and entrepreneurial strategies should be developed and implemented based on the cross-fertilisation methodological approach.

**Green Policy Responses and Implications in Latvia as an EU Member State**

In 2021, the European Union unveiled the most ambitious plan to date to combat climate change and issued a Regulation on establishing the European Climate Law (Regulation (EU) 2021/1119). The planned measures aim to transform the economic life of the EU and its Member States so that their daily lives become more environmentally friendly in the next decade. The commitment is to reduce greenhouse gas emissions by 55% over the next 10 years and to become fully climate neutral by 2050. Achieving the 2030 target of a 55% reduction in environmentally harmful emissions will require 350 billion euros in additional investment each year, so more capital needs to be raised for green economic activity. Latvia (OECD, 2019) is on a good pathway towards reaching many of the SDGs and the country’s economy has managed to decouple several environmental pressures from its sustained economic growth, although challenges remain. It has significant opportunities for accelerating the transition towards a low-carbon, greener, more inclusive economy, especially by investing in energy efficiency, renewables, sustainable forestry, and sound waste and material management. To seize these opportunities, the country should make better use of economic instruments, remove potentially perverse incentives, and improve the quality of its environment-related infrastructure and services. A well-developed, comprehensive framework for sustainable development and, moreover, for environmentally responsible business and entrepreneurial strategies applying the cross-fertilisation methodological approach will be a significant move in the government/business green partnership. The framework is defined by the law and adopts the principle of vertical or hierarchical and horizontal coordination of planning documents. The current Latvian environmental policy guidelines from 2021 to 2027 envisages the strategic objectives, priorities, and measures for sustainable, balanced development of the Latvian national economy for the next seven-year planning period, as defined in box 1 below.
Box 1. Strategic Objectives, Priorities, and Measures for Sustainable and Balanced Development

<table>
<thead>
<tr>
<th>Achieving the 2030 greenhouse gas reduction target and achieve climate neutrality by 2050.</th>
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<tbody>
<tr>
<td>- Improving adaptability, strengthening resilience, and reducing vulnerability to climate change.</td>
</tr>
<tr>
<td>- Making progress towards a renewable growth model by decoupling economic growth from resource use and environmental depletion and acceleration the transition to a circular economy.</td>
</tr>
<tr>
<td>- Aiming for zero pollution in an environment, i.e., the removal of toxic substances in the air, water, and soil, thus also protecting the health and well-being of Europeans.</td>
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<tr>
<td>- Protecting, preserving, and restoring biodiversity and increasing natural capital, in particular the air, water, soil, along with forest, freshwater, wetland, and marine ecosystems.</td>
</tr>
<tr>
<td>- Promoting environmental sustainability and reducing environmental and climate pressures related to production and consumption in general in the fields of energy, industrial development, buildings and infrastructure, mobility, and food systems.</td>
</tr>
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</table>

Source: Saiema, Republic of Latvia, 2020, p. 49.

Another meaningful document is the Sustainable Development Strategy of Latvia until 2030 (Saiema, Republic of Latvia, 2010, p. 10). That document includes long-term priorities, goals, and action lines, and is broadly consistent with the SDGs. It is based on a so-called “capitals” approach to sustainable development, which primarily focuses on wealth creation within the planet’s ecological limits, with an emphasis on the correlation between environmental and economic systems. A capitals approach enables organisations to understand how their success is directly or indirectly underpinned by natural capital, social capital, and human capital, thus empowering them to make decisions that offer the greatest value across all the aforementioned capitals. Latvia, in its goals for 2030, has a higher political standing than the previous sustainable development strategy and is aiming at developing flourishing communities, strong and resilient social institutions, prosperous natural ecosystems, and a stable-climate emphasis of economic and societal prosperity.

Broad public participation helped the strategy gain the legitimacy of a social contract and the broad support needed for its implementation. All SDGs are being integrated into the planning system and decision-making at all levels in Latvia. The progress of the system in achieving SDGs is being observed by national and international experts. According to the experts, the country needs to consider providing and ensuring
a link between the economic, environmental, and social opportunities of moving towards a circular economy, enhancing innovation and eco-efficiency, reducing inequality, and improving access to education and healthcare. Several areas for action have been identified and suggested, based on the cross-fertilisation approach. The following potential achievements in the areas of labour market performance are: increased productivity including more efficient use of resources and larger investment in research and innovation; improvements in healthcare and social welfare systems; service provision to low-density areas; including road infrastructure; public transport and housing as well as adapting to climate change; reducing GHG (greenhouse gases) emission; and promoting a wider use of renewable energy sources (Saiema, the Republic of Latvia, 2018).

Sustaining growth in the long term will also require more investment in education (OECD, 2019), and innovation to further diversify exports towards products and services with higher technological content and value added.

The EU’s Green Industrial Policy and the Maturity of Latvia in the Green Transition

Green economy and green business are increasingly accepted as key drivers in tackling climate change, pollution, and health-based issues to improve life for people. The process of shifting economies “from brown to green” is one of the most significant socio-economic transformations in modern times. Green transformation can be defined as combining economic growth with caring about the environment in order to guarantee a high quality of life for present and future generations at a level which is attainable due to civilisational development, as well as to the effective and rational use of available resources (Cheba et al., 2022, p. 108601). Green growth has the potential to stimulate transformative changes in the direction of sustainable development, but what is more important is the proactive role of governments in restructuring their economies and forming a framework of instruments and measures that impact the activities of business entities in their intentions to become, in the first instance, ecologically sustainable. Such processes concern green transformation and could be considered as part of the concept of the 4th industrial revolution, relying on significant technological advances, thus becoming socially acceptable (Bruegel, 2020, p. 4). Green transformation is fundamentally driven by introducing renewable energy resources as a new energy regime (Siekmann, Schlor, Venghaus, 2023). One of the
strategies to reach targets of green transformation is a green industrial policy at the EU-and-EU-Member-State levels.

As a new initiative, the Green Deal Industrial Plan was introduced by the European Commission in 2023 [COM(2023) 161, COM(2023) 160] with the aim to ensure the transition to green growth and steady, sustainable development. Additionally, the Green Deal Industrial Plan intends to enhance the competitiveness of the bloc’s industry on the path to net-zero greenhouse gas emissions. Moreover, there is a strong demand for investment in the green transition. As a result, a new balance between sustainability requirements and strategic economic interests, especially in the areas of trade and investment, is essential. Strategic economic interests are supposed to help to avoid an international disadvantage of EU industry and the risk of a decline in foreign directs investments (FDI) in Europe. As statistics show, in 2022, FDI rose only 1% compared with 2021, and remains 7% lower than in 2019, just before the onset of the COVID-19 pandemic (EY, 2023, p. 6; European Court of Auditors, 2023, p. 8). The shift towards an increase in competitiveness of the EU economy and growth in investments could be achieved as a result of an implementation of the EU industrial strategy and therefore strengthen the bloc’s industry. These measures compliment the Green Deal.

As is common knowledge, the EU’s approach in industrial policy has an eclectic and cross-cutting nature as well as combining interventionist and market-based policies to secure a framework of favourable conditions to ensure industrial competitiveness at the level of the EU as well as the level of the Member States. The industrial policy is implemented together with other EU policies such as those of regional and cohesion policies and trade policy, thereby fostering better exploitation of the industrial potential of policies of innovation, research, and technological development (Article 173, TFEU, 2012). Green industrial policy follows this same approach of state-driven structural change while also promoting broader social and environmental goals.

Governments can operationalise the structural change necessary for economic growth, competitiveness, and new jobs. A shift from traditional types of industrial policies to an industrial policy that embraces environmental and energy policies could accelerate structural transformation and enhance productivity of national economies.

Overall, green industrial policy initiatives are undertaken at regional, national, and EU levels. These initiatives are, however, not necessarily coordinated, which can even lead to conflicting relationships due to differences in policies and their implementation in diverse EU countries. The central issue is the existing fragmentations in the EU’s Single Market
which prevent innovative green technologies from being fully competitive internationally. One of the ways to increase the competitiveness of EU businesses is to strengthen regulation and standardisation, which would reinforce the EU as a leader in common environmental standard-settings as a part of the regulation as one of the essentials of the EU Single Market. It is important to stress that national barriers towards the green transformation of the entire bloc should be diminished, and energy and transport infrastructure should be widened.

The green industrial policy’s framework in Latvia, including its tasks and targets, represents an example of green industrial policy implementation at the level of an EU Member State. Latvia has a small, open economy with a small industrial base, but a large agriculture and forestry sector. Until the outbreak of the COVID-19 pandemic, Latvia’s economic growth remained stable, exceeding the EU average. Nevertheless, according to the European Parliamentary Research Service (Saulnier, 2022), uncertainty remains elevated. The OECD noted that productivity growth went into decline following the 2008 global crisis, and that another risk is the quickly declining size of the Latvian population due to ageing and emigration. The OECD also stresses that policies to enhance digital transformation along with green and digital transition are of prime importance to address the green industrial policy (OECD, 2021). Furthermore, experts estimated that rapidly increasing prices of natural gas and other energy resources in 2022 could continue to rise in 2023 and 2024. According to the Central Statistical Bureau of Latvia (CSB), in 2022, electricity prices increased almost twofold compared to the price of electricity in 2021 with the price of natural gas for consumers increasing almost 2.5 times (CSB, 2022). The above considerations might have a negative impact in the years to come on the timely implementation of the green transition goals. The Latvian economy needs a reorganisation of the country’s industrial system while applying a diverse, cross-sector approach.

The competitive advantages of the Latvian economy mainly rely on technological factors and improvements in production efficiency and innovations. However, to a lesser extent, the advantages lie in low labour and resource prices. Reframing green investments should be complemented by measures that improve skills and facilitate the reallocation of labour and capital. The labour market itself has been seriously affected by the negative demographic situation in the country, leaving a mark on both unemployment and the dynamics of the number of employees. Furthermore, working-age people will need to cope with an increasing old-age dependency problem, as well as structural and technological
changes in economies and businesses expected in the time of the 4\textsuperscript{th} industrial revolution. Furthermore, it becomes increasingly difficult for the unemployed to adapt to new labour-market needs. Risks that some of the unemployed may have difficulty finding a job matching their skills in the future remain high. According to experts from government institutions (Ministry of Economy of Latvia, 2020), the supply of adequately skilled workers could significantly decrease in the future, and the importance of practice-integrated education in higher educational institutions will continue to surge (Stacenko, Muravska, Briõkena, 2023, p. 192). Moreover, to increase the maturity of green economy and business in the country, a high degree of interaction between the public and private sectors is required. In this respect, Latvia\textquotesingle s Ministry of Economy, in cooperation with all line ministries, set out tasks and guidelines for the green industrial policy\textquotesingle s development, with emphasis on stimulating investment for business development and strengthening the comparative advantages of the national economy towards green transition (Cabinet of Ministers of the Republic of Latvia, 2021). The guidelines recognise the context of a rapidly changing labour market, as it does the need for employees to constantly acquire new knowledge and the need for employers to invest in technological development and the education of their employees. The industrial policy\textquotesingle s instruments are those of enterprise policy, with the main task to set up an environment and conditions in which entrepreneurs and business entities can take initiatives and implement their innovative activities. As a result of the government/business green partnership, the strengths and weaknesses of the national economy in general and national industries in particular are analysed and corrected according to the changing internal and external environment and may trigger cross-sectoral or sectoral policy initiatives.

Conclusions

With respect to governance and private businesses\textquotesingle green partnership\textquotesingle s mechanisms for mainstreaming the EU\textquotesingle s green policies, this article captures and assesses different measures taken by the EU and the government of Latvia. The achievement of the EU\textquotesingle s green policies is determined by a combination of dynamics and synergies between public management strategies and instruments that are capable of implementing effective public policy in an adequate partnership with private business and entrepreneurship.

The article suggested a cross-fertilisation approach be applied in the decision-making process as it allows for the implementation of green
policies in national economies in the most effective manner and helps to coordinate actions with business investments and entrepreneurial activities.

On a wider regional scale, such a government-and-private-business green partnership represents a tool that will inevitably help to increase the environmental competitiveness of the EU and its Member States. The broad EU green-industrial-policy framework should become embedded in Member State national reform programmes. Indeed, government and business partnerships as regards green-growth implementation can ensure access to skills, knowledge, and green investments. To avoid risks in such partnerships, there is a need to have long-term planning at the EU and national levels with a clear set of targets and measures to ensure the green transition in the EU its Member States. EU Industrial Policy and national industrial policies require coordinated actions in certain green technologies, regulation, and standardisation, which help to avoid fragmentation in the Single Market and develop a solid regulatory framework focused on ensuring competition and access to the Single Market, with common or mutually-recognised environmental standards. The example of the cross-fertilisation approach in the decision-making process in Latvia shows that that particular EU Member State follows the main EU trends in green transition. Likewise, the instruments applied in internal economic and business environments are adjusted to the level of economic and business development and specific problems in different sectors of the national economy. The EU’s actions in green industrial policy help the Latvian government to develop action plans that include green industrial policy recommendations.

As a result of the government/business green partnership, the strengths of the national economy in general and national industries, and their weaknesses in particular, should be assessed and further corrected in relation to changes in the internal and external environment and, as a result, produce efficient cross-sectoral and sectoral policy initiatives.

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