Pak. j. life soc. Sci. (2024), 22(2):12497-12506 E-ISSN: 2221-7630;P-ISSN: 1727-4915

Pakistan Journal of Life and Social Sciences
www.pjlss.edu.pk

https://doi.org/10.57239/PJLSS-2024-22.2.00894

RESEARCH ARTICLE

Ecological Transition and Sustainable Economic Growth: Levers, Challenges and Perspectives, Case of Morocco

Ilias Boulajraf[1*], Khalid Rguibi[2], Nour Imane Hazzam[3]

[1,2,3] Research Laboratory in Organizational Management Science, ENCG, Ibn Tofail University, Kenitra, Morocco

ARTICLE INFO

Received: Sep 12, 2024

Accepted: Nov 9, 2024

Keywords

Green Transition

Sustainable Economic Growth

Institutional Levers

Green Economy Challenges

Emerging Perspectives

***Corresponding Author:**

ilias.boulajraf@uit.ac.ma

ABSTRACT

The ecological transition, as a fundamental lever for transformation, is redefining the global economic landscape. The delicate balance between economic growth and environmental preservation is at the heart of this development. In this regard, an in-depth study of the institutional and political levers that guide this transition is of paramount importance. Understanding how these mechanisms can be activated without hindering the existing economic dynamics is a major challenge for policymakers.

Equally crucially, the analysis of the concrete challenges related to the integration of the green economy helps to highlight the operational obstacles that mark this transition. Identifying these critical points provides an opportunity to formulate pragmatic solutions and define effective action strategies. Thus, the research is part of a practical perspective, aimed at providing tangible tools to overcome the barriers to the ecological transition.

Exploring emerging perspectives highlights the opportunities that a successful transition generates. It reveals the new horizons that are emerging for economic and government players, offering avenues for innovation and investment. This approach aims to enlighten decision-makers on promising avenues that could shape the economy of tomorrow, anchored in sustainable growth in line with contemporary ecological imperatives. In summary, this study is positioned as an in-depth exploration of the dynamics at play in the ecological transition, offering enlightened perspectives to guide economic actors towards sustainable prosperity.

INTRODUCTION

The ecological transition and sustainable economic growth are now at the heart of global concerns. In the face of the climate emergency, the depletion of natural resources and the growing threats to biodiversity, the need for a profound transformation of our production and consumption patterns is essential. This transition represents a major challenge but also a historic opportunity to rethink our economic, social and environmental models with a view to a fairer and more resilient future.

The concept of ecological transition encompasses a set of measures aimed at reducing our environmental footprint while ensuring the well-being of future generations. This includes promoting renewable energy, preserving ecosystems, reducing greenhouse gas emissions and adopting more sustainable production and consumption patterns. At the same time, sustainable

economic growth aims to reconcile economic development, social inclusion and environmental preservation, by adopting long-term strategies and integrating social, environmental and economic dimensions into decision-making processes.

This transition is based on several levers, at the same time technological, political, financial and societal. Technological advances in clean energy, energy efficiency, sustainable mobility and waste management play a crucial role in this transition. Similarly, ambitious public policies, financial incentives and binding regulations are needed to encourage green investment and steer behaviour towards more sustainable practices. Finally, the involvement and awareness of all actors in society, whether companies, governments, citizens or non-governmental organizations, are essential to bring about a real paradigm shift.

However, this transition is not without its challenges. It requires profound transformations in all sectors of the economy, which implies sometimes difficult adjustments and resistance to change. In addition, it raises issues of social justice and wealth redistribution, particularly in developing countries where the impacts of the transition may be more pronounced on the most vulnerable populations. Finally, the ecological transition and sustainable economic growth require substantial investments and enhanced international cooperation to be fully effective on a global scale.

Despite these challenges, the green transition and sustainable economic growth offer promising prospects for the future. By taking an integrated and collaborative approach, mobilizing the necessary resources, and promoting innovation and creativity, it is possible to build a more sustainable, equitable, and resilient world for present and future generations.

The methodology adopted in this study focuses on a prospective assessment of ecological transition and sustainable economic growth policies in Morocco, followed by recommendations for the future. We will analyse current policies to identify their strengths and weaknesses, and then make recommendations based on economic and environmental projections.

On this, the central question that emerges is: How can we orchestrate the ecological transition in a way that fosters sustainable economic growth, aligning social, economic and environmental interests?

CONCEPTUAL FOUNDATIONS OF THE ECOLOGICAL TRANSITION AND SUSTAINABLE ECONOMIC GROWTH

Ecological Transition: Conceptual Bases and Theoretical Foundations

The green transition, also known as the transition to environmental sustainability, represents a systemic shift towards more environmentally friendly and socially equitable patterns of production and consumption (Smith & Stirling, 2010). This transition is based on solid conceptual foundations and varied theoretical foundations, which are essential for understanding and guiding actions towards a sustainable future (Geels, 2011).

The ecological transition is a complex and multifactorial process that involves profound changes in existing socio-economic systems.[1] It aims to reduce the ecological footprint of human activity while maintaining human well-being and social justice (Kemp & Rotmans, 2009). This concept is based on the idea that current development models are unsustainable in the long term due to their dependence on non-renewable resources and their adverse effects on the environment.

[1] Kemp, R., & Rotmans, J. (2009). Transition management: A reflexive governance approach. Theories of sustainable development, 133-159.

Several theoretical frameworks contribute to the understanding of the ecological transition. The theory of socio-technical transitions highlights the role of technological and social innovations in regime change towards more sustainable practices (Grin et al., 2010). Similarly, resilience theory emphasizes the ability of socio-ecological systems to adapt and transform in the face of environmental disturbances (Folke et al., 2010).

The green transition also requires appropriate political and economic frameworks.[2] The political ecology approach highlights the power dynamics that shape environmental policies and proposes strategies to promote participatory and equitable environmental governance (Dryzek, 2005). On the other hand, the economic theories of ecological economics and circular economy offer tools to reorient economic models towards sustainability by integrating environmental externalities into production and consumption processes (Costanza et al., 1997).

An additional idea to be explored in the context of the ecological transition is that of environmental justice. Environmental justice examines environmental inequalities that often result from the unequal distribution of environmental costs and benefits within society. It highlights disparities in access to natural resources and ecosystem services, as well as in exposure to environmental risks.

This perspective can enrich our understanding of the green transition by highlighting the importance of addressing environmental injustices and integrating equity principles into the design and implementation of environmental policies. By taking into account the social and ethical dimensions of environmental sustainability, environmental justice can help shape a more inclusive and equitable ecological transition.

Sustainable Economic Growth: Models and Approaches

Sustainable economic growth refers to a growth model that takes into account environmental, social and economic aspects, and aims to ensure the long-term sustainability of that growth without compromising natural resources, ecosystems, or social and human conditions.

It is based on the "triple bottom line" principle, which seeks to optimize not only economic profits, but also social and environmental benefits. This involves maximizing economic value creation while minimizing negative externalities on the environment and promoting social inclusion.

Sustainable economic growth has become a major goal for many nations and organizations around the world, given growing concerns about natural resource depletion, climate change, and social inequality. To achieve this goal, various models and approaches have been proposed to shape economic growth that is both environmentally viable, socially inclusive and economically profitable, thus, sustainable economic growth is a complex concept that requires a deep understanding of different theoretical models and approaches. By examining these models and approaches, we can better understand the challenges and opportunities of achieving sustainable economic growth.

The endogenous growth model, developed by economists such as Paul Romer and Robert Lucas, emphasizes the role of innovation and human capital accumulation in stimulating long-term economic growth (Romer, 1986). This model argues that policies that promote investment in research and development, education and vocational training can lead to sustained economic growth while preserving natural resources.[3]

The circular economy is an economic model that aims to minimize waste and maximize the use of resources by keeping them in the economic cycle for as long as possible (Ellen MacArthur

[2] Dryzek, J. S. (2005). The politics of the earth: Environmental discourses. Oxford University Press.
[3] Romer, P. M. (1986). Increasing returns and long-run growth. Journal of Political Economy, 94(5), 1002-1037.

Foundation, 2013). This model is based on the principles of green design, reuse, repair and recycling, and provides a framework to promote sustainable economic growth by reducing the environmental footprint of economic activities.[4]

The theory of sustainable development, initiated by the Brundtland Report in 1987, proposes an integrated approach to economic, social and environmental development that meets the needs of the present without compromising the ability of future generations to meet their own needs (WCED, 1987). This theory emphasizes the need to reconcile the objectives of economic growth with the protection of the environment and the promotion of long-term social well-being.

The economics of scarcity, developed by Herman Daly and other economic ecologists, challenges the paradigm of infinite growth in a world of limited resources (Daly, 1991). This approach proposes measures to reorient the economy towards a more efficient use of natural resources and a reduction in mass consumption, while ensuring a satisfactory standard of living for all.[5]

At the same time, the social and solidarity economy (SSE) represents another important approach for sustainable economic growth. SSE encompasses a variety of business models focused on cooperation, solidarity and environmental sustainability. Cooperatives, social enterprises and non-profit associations that are part of the SSE contribute to strengthening the social fabric, reducing inequalities and promoting a more inclusive economy (Borzaga & Defourny, 2001).

Another approach worth mentioning is that of the economics of well-being, which proposes a measure of economic growth that takes into account the well-being and quality of life of individuals. By integrating indicators such as health, education, happiness, and economic security, the economics of well-being offers a more holistic perspective of economic growth and emphasizes sustainable human development (Stiglitz, Sen & Fitoussi, 2009).

By integrating these different theories and approaches, we can develop more holistic and sustainable economic strategies to promote economic growth that is compatible with environmental and social imperatives.

ECOLOGICAL TRANSITION AND ECONOMIC GROWTH IN MOROCCO: TOWARDS A HARMONIOUS CONVERGENCE

Uncertainties and Risks: Managing Constraints in a Transition Context

In the context of the transition to a greener economy, managing uncertainties and risks represents a major challenge for governments, businesses and civil society actors. This transition involves profound changes in production and consumption patterns, as well as in public policies and corporate strategies, which inevitably generates uncertainties about the economic, social and environmental impacts in the short and long term.

First, uncertainties related to new environmental policies and regulations can hinder investment and business decisions. Businesses must navigate an ever-changing regulatory landscape, which can make it difficult to plan for the long term and allocate resources. Similarly, governments need to balance the need to promote the green transition with economic concerns such as international competitiveness and job creation, which can lead to trade-offs and regular policy adjustments.

Second, environmental risks related to climate change, biodiversity loss, and ecosystem degradation add an additional layer of uncertainty. Extreme events such as storms, droughts, and floods can have

[4] Ellen MacArthur Foundation. (2013). Towards the Circular Economy: Economic and Business Rationale for an Accelerated Transition. Ellen MacArthur Foundation.
[5] Daly, H. E. (1991). Steady-state economics: Second edition with new essays. Island Press.

devastating impacts on businesses, infrastructure, and communities, requiring proactive risk management and increased resilience.

Third, uncertainties about technological innovations and emerging business models can also influence the green transition. While new technologies such as renewable energy, e-mobility and recyclable materials offer opportunities for sustainable economic growth, their large-scale adoption and integration into existing processes can be hampered by technical, financial and social challenges.

Understanding and managing uncertainties and risks in the context of Morocco's green transition is essential to ensure sustainable and resilient development. Uncertainties about the future availability of natural resources, such as water, are major concerns in a country where agriculture is a critical component of the economy. According to data from the Ministry of Energy, Mines and Environment (2023), Morocco is facing increasing pressure on its water resources due to increasing demand in agriculture and industry, as well as the effects of climate change on rainfall availability. This uncertainty about the future availability of water creates risks to the country's food security, economic stability and social cohesion.

In addition, the risks associated with extreme weather events are a growing concern. According to data from the National Center for Scientific and Technical Research (2022), Morocco is facing an increase in extreme weather events such as droughts and floods, exacerbated by climate change. These events have significant economic, social and environmental impacts, including crop losses, infrastructure damage and population displacement.

Table 1: Diagnosis of the Kingdom's ecological transition policy

Forces	**Weaknesses**
- Political commitment: Morocco has shown a strong commitment to the ecological transition, with the adoption of ambitious environmental policies and strategies. - Abundant natural resources: The country has significant natural resources, such as solar and wind power, offering potential for renewable energy development. - Investments in green infrastructure: Morocco has invested in sustainable infrastructure such as wind and solar farms, strengthening its potential for a successful green transition.	- Dependence on fossil fuels: Despite progress in the field of renewable energy, Morocco remains dependent on fossil fuels to meet its energy needs. - Waste management: Waste management remains a major challenge in Morocco, with insufficient infrastructure and inadequate management practices. - Pressure on natural resources: Economic and population growth is leading to increased pressure on the country's natural resources, threatening its environmental sustainability.
Opportunities	Threats
- Development of renewable energy: Morocco has immense potential to further develop renewable energy, creating opportunities for green economic growth and the reduction of greenhouse gas emissions. - Technological innovation: Technological advances provide opportunities to develop innovative solutions in the areas of clean energy, sustainable agriculture, and natural resource management.	- Climate change: Morocco is vulnerable to the impacts of climate change, such as drought, flooding, and sea level rise, which can jeopardize its green transition efforts. - Political instability: Political instability can hinder the implementation of effective environmental policies and the mobilization of the resources needed to support the green transition. - Economic pressures: Economic pressures and competing priorities can limit

- Regional leadership: By becoming a regional leader in the green transition, Morocco can strengthen its position on the international stage and attract more green investment.	investments in the green transition, especially in a context of rapid economic development.

Source: Designed by ourselves

Morocco has strengths in terms of ecological transition, in particular its potential in renewable energies and its political commitment. However, it faces challenges such as limited infrastructure and institutional capacity to be strengthened. Opportunities lie in using solar and wind potential to boost the economy, while threats include climate challenges and continued reliance on fossil fuels. An integrated approach and targeted investments will be key to overcoming these obstacles and ensuring a successful green transition.

Managing uncertainties and risks requires a proactive and integrated approach, involving collaboration between government, the private sector, civil society and local communities. Effective policies and strategies are needed to promote sustainable management of natural resources, build resilience to extreme weather events, and promote adaptation to climate change. For example, Morocco's National Water Plan aims to ensure integrated and sustainable management of water resources, taking into account the increasing pressures related to population growth and environmental changes (Ministry of Energy, Mines and Environment, 2021). In addition, Morocco's National Adaptation Plan to Climate Change (PANCC) aims to strengthen the resilience of key sectors to the impacts of climate change (Ministry of Energy, Mines and Environment, 2020).

Thus, Morocco is facing major challenges in its ecological transition, as evidenced by the following key data.

- Pressure on water resources in Morocco is increasing, with increasing demand in agriculture and industry (Ministry of Energy, Mines and Environment, 2023).
- Morocco is facing an increase in extreme weather events such as droughts and floods, exacerbated by climate change (National Center for Scientific and Technical Research, 2022).
- More than 80% of Morocco's electricity production still comes from fossil fuels (Ministry of Energy, Mines and Environment, 2023).
- Morocco could produce up to 50% of its electricity from renewable sources by 2030 (International Energy Agency, 2024).
- These figures underscore the urgent importance of policies and actions to promote environmental sustainability and accelerate the transition to renewable energy sources in Morocco.

Innovative Solutions: Towards Regenerative and Ecological Economic Growth in Morocco

The transition to regenerative and green economic growth is a global imperative, and Morocco is no exception. As a developing country, Morocco faces growing environmental challenges while seeking to promote sustainable economic development. To address these challenges, innovative solutions are needed, ranging from the adoption of renewable energy to the promotion of sustainable agriculture.

Renewable

Morocco has made huge strides in the field of renewable energy over the past decade. In 2016, the country inaugurated the first phase of the Noor solar power plant in Ouarzazate, which has become one of the largest concentrated solar power plants in the world. This plant is part of the Moroccan

Solar Plan, which aims to increase the share of renewable energy to 52% of installed electricity capacity by 2030. These initiatives not only have a positive impact on the environment by reducing CO2 emissions, but they also help to boost employment and economic growth in the renewable energy sector.

Agriculture Durable

Agriculture is a key sector of the Moroccan economy, but it faces challenges such as water scarcity and soil degradation. To promote sustainable agriculture, Morocco is committed to integrated water resources management programs and the promotion of agroecology. For example, the Green Morocco Plan aims to modernize agriculture while preserving natural resources. Practices such as drip irrigation and crop rotation are encouraged to improve water use efficiency and maintain soil fertility.

Sustainable Transport

The transport sector is another key area where innovative solutions can contribute to regenerative and green economic growth. Morocco is working to promote sustainable transport by investing in public transport and encouraging the electrification of vehicles. For example, the Casablanca tramway is one of the largest tram networks in Africa and helps reduce greenhouse gas emissions while improving urban mobility.

Table 2: Key Indicators of Economic and Environmental Sustainability in Morocco

Renewable	Agriculture Durable	Sustainable Transport
In 2019, the installed solar energy capacity in Morocco amounted to about 1,020 megawatts (MW), with projects being developed under the Moroccan Solar Plan to achieve the target of 52% renewable energy by 2030.	The Green Morocco Plan, launched in 2008, aims to modernize and develop the Moroccan agricultural sector. In 2018, the Moroccan government announced an investment of $17 billion in the agricultural sector over the next ten years.	The Casablanca tramway, inaugurated in 2012, is one of the largest tramway networks in Africa, covering 31 kilometers and serving more than 200,000 passengers per day.
The Moroccan Solar Plan aims to install 6,000 MW of solar capacity by 2030, which will save 17.5 million tons of CO2 per year.	Agriculture accounts for about 40% of total employment in Morocco and contributes 14% to the country's GDP.	In 2020, Morocco announced a plan to electrify its taxi fleet, aiming to replace 30% of traditional taxis with electric vehicles by 2023.
The Noor solar power plant in Ouarzazate, inaugurated in 2016, has a production capacity of 580 MW and provides electricity to more than one million households.	About 80% of agricultural land in Morocco is affected by land degradation, mainly due to overexploitation and poor management of water resources.	Morocco plans to invest about $14 billion in the transport sector by 2035, with a particular focus on public transport and sustainable infrastructure.

Source: Departmental Reports

ANALYSIS OF ECOLOGICAL TRANSITION POLICIES IN MOROCCO: EVALUATIONS AND RECOMMENDATIONS.

Critical evaluation of ecological transition policies in Morocco: an analytical view

The critical evaluation of ecological transition policies in Morocco requires an in-depth analysis of various aspects. First, let's look at the effectiveness of existing policies.

Morocco has taken significant steps to promote renewable energy, including solar and wind. According to data from the Ministry of Energy, Mines and Environment, installed renewable energy capacity has increased by 42% in the last five years, from 2,500 MW to 3,550 MW. This increase reflects Morocco's commitment to the transition to a green economy.

However, despite the progress made in this area, challenges remain. When it comes to solar energy, for example, the rate of capacity used remains low due to grid connection and storage issues. According to data from the Moroccan Agency for Sustainable Energy, only 30% of installed solar capacity is currently in use.

With regard to waste management, Morocco has put in place policies to encourage recycling and reduce the amount of waste sent to landfill. However, challenges persist in terms of waste treatment infrastructure and public awareness.

With regard to the preservation of biodiversity, Morocco has taken measures to protect its fragile ecosystems, including the creation of nature reserves and the implementation of conservation policies. However, the impact of these policies on local biodiversity and ecosystem sustainability requires continuous evaluation.

In terms of progress and challenges in implementation, it is important to note regulatory and institutional barriers. Bureaucratic constraints and gaps in environmental legislation can hinder the effective implementation of green transition policies. In addition, technical and infrastructural challenges such as the lack of suitable infrastructure can also be significant obstacles.

When it comes to water management, Morocco faces significant challenges due to the scarcity of water resources in some parts of the country. Effective water conservation policies and irrigation projects are essential to ensure the sustainable use of this vital resource. However, issues such as overexploitation of groundwater and unsustainable agricultural practices are jeopardizing future water availability.

In the field of sustainable mobility, Morocco seeks to reduce greenhouse gas emissions by encouraging the use of public transport and electric vehicles. Investments in public transport infrastructure and financial incentives for the purchase of electric vehicles are important measures to reduce dependence on fossil fuels and improve air quality.

With regard to the management of natural resources, Morocco also faces the challenge of land degradation and desertification in some parts of the country. Soil conservation and ecosystem restoration policies are needed to preserve the fertility of agricultural land and combat desertification.

For greenhouse gas emissions, Morocco has committed to reducing its emissions in accordance with the Paris Agreement. However, more efforts are needed to meet emission reduction targets and to address the effects of climate change, such as rising temperatures and extreme weather events.

In the field of sustainable agriculture, Morocco seeks to promote environmentally friendly agricultural practices, such as agroecology and the rational use of natural resources. Policies to

encourage crop diversification, reduce pesticide use and promote organic farming are essential to ensure the sustainability of the agricultural sector.

Finally, and for environmental education and awareness, Morocco strives to promote a culture of sustainability and environmental responsibility at all levels of society. Educational programs and awareness campaigns are essential to encourage environmentally responsible behaviour and promote collective awareness of environmental issues.

Although Morocco has taken significant steps in its ecological transition, challenges remain in various areas such as the integration of renewable energy, the management of natural resources and the preservation of biodiversity. A critical assessment of these policies highlights the need for an integrated and coordinated approach to overcome these challenges and continue the path towards a more sustainable and resilient economy in Morocco.

Strategic Recommendations for Optimizing Ecological Transition Policies in Morocco: Prospects and Challenges

In the context of the ecological transition in Morocco, it is imperative to formulate strategic recommendations in order to optimize existing policies and address the challenges that hinder their effectiveness. These recommendations should be based on a thorough analysis of the current outlook and obstacles encountered, while taking into account future opportunities to foster a successful green transition in the country.

Strengthening green infrastructure: A key recommendation is to invest more in green infrastructure development, particularly in the areas of renewable energy, waste management and sustainable transportation. This means putting in place adequate incentive policies and financing to encourage investment in these strategic sectors, while ensuring integrated urban planning to promote sustainable lifestyles.

Promoting innovation and technology: Another important recommendation is to promote innovation and the adoption of clean technologies in all sectors of the economy. This could include the development of research and development programs, as well as tax incentives for companies that invest in environmentally friendly technologies. It is also essential to strengthen collaboration between the public sector, the private sector and academic institutions to stimulate innovation in the field of green transition.

Strengthening environmental governance: A key recommendation is to strengthen environmental governance at all levels, with a focus on transparency, accountability and citizen participation. This involves strengthening institutional and regulatory capacities, improving coordination between different government and civil society actors, as well as promoting public awareness of environmental issues. Effective monitoring and evaluation mechanisms must also be put in place to ensure the successful implementation of green transition policies.

Promoting economic and social sustainability: Finally, it is crucial to promote economic and social sustainability in the context of the ecological transition. This means putting in place policies to support green industries and small and medium-sized enterprises committed to sustainable practices. In addition, it is important to adopt inclusive policies that ensure that the benefits of the green transition are shared equitably and that the most vulnerable communities are taken into account.

CONCLUSION

The ecological transition and sustainable economic growth are major challenges for Morocco, and their interconnection is crucial to ensure a prosperous and balanced future. Through the examination

of the levers and challenges inherent in this transition, it is clear that concerted and ambitious actions are needed to reconcile economic and environmental imperatives.

Morocco faces significant challenges, such as environmental degradation, dependence on fossil fuels, pressure on natural resources, and the effects of climate change. However, these challenges are also opportunities to rethink our business model and put in place innovative policies that promote economic growth while preserving our environment.

To do this, several levers can be activated. Firstly, it is essential to invest in renewable energy and energy efficiency in order to reduce our dependence on fossil fuels and promote a sustainable energy transition. Second, encouraging innovation and technological development in green sectors can boost economic competitiveness while reducing our environmental footprint.

In addition, an integrated approach is needed, involving collaboration between the public and private sectors, civil society and citizens. It also requires a strong regulatory framework and economic incentives to encourage companies to adopt sustainable practices and invest in environmentally friendly solutions.

Finally, it is crucial to raise awareness and educate the population on the challenges of the ecological transition and sustainable economic growth, in order to mobilise social support and promote behavioural change at all levels of society.

In conclusion, the ecological transition and sustainable economic growth offer promising prospects for Morocco. By mobilizing all actors around a common vision, adopting bold policies, and investing in innovative solutions, Morocco can create a more resilient, inclusive, and environmentally friendly economic model, ensuring a prosperous and sustainable future for generations to come.

REFERENCES

- Daly, H. E. (1991). *Steady-state economics: Second edition with new essays.* Island Press.
- Dryzek, J. S. (2005). *The politics of the earth: Environmental discourses.* Oxford University Press.
- Ellen MacArthur Foundation. (2013). *Towards the Circular Economy: Economic and Business Rationale for an Accelerated Transition.* Ellen MacArthur Foundation.
- Kemp, R., & Rotmans, J. (2009). *Transition management: A reflexive governance approach.* Theories of sustainable development, 133-159.
- Romer, P. M. (1986). *Increasing returns and long-run growth.* Journal of Political Economy, 94(5), 1002-1037.
- Departmental reports