European Commission

Challenges for cohesion: looking ahead to 2035

Final report

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Abstract

English

The study delves into the future landscape of EU Cohesion Policy, set against the backdrop of three challenges: globalisation and technological advancements, shifting demographic trends, and the transition to a climate-neutral economy. To assess the impacts of these challenges on various EU regions, the study performs a regional vulnerability analysis, utilises four macroeconomic models to project potential developments in the economy and examines the on-the-ground responses to the challenges via case studies.

The study highlights several risks. Globalisation and technological change may exacerbate regional disparities, as economically stronger regions are better equipped to leverage new technologies, driving innovation and growth. The demographic transition poses challenges to EU regions, particularly those with ageing populations and declining workforces. The transition to a climate-neutral economy presents risks for regions that rely on fossil fuel extraction. However, it also presents opportunities for regions with the potential for renewable energy production.

The study puts forward a number of recommendations on how to tackle these risks of multiple transitions including a dynamic approach to regional development; targeted investments in less developed regions to create new opportunities based on renewable energy sources; an enhanced funding for effective support; cohesion as a shared objective between all EU policies; a coordinated approach to development; or enhancing the authorities' capacity to respond to emerging challenges.

French

L'étude explore le paysage futur de la politique de cohésion de l'UE dans le contexte de trois défis: la mondialisation et les avancées technologiques, les évolutions démographiques et la transition vers une économie neutre en carbone. Afin d'évaluer les impacts de ces défis sur les différentes régions de l'UE, l'étude effectue une analyse de la vulnérabilité régionale, utilise quatre modèles macroéconomiques pour anticiper les évolutions économiques potentielles et examine les réponses locales à ces défis à travers des études de cas.

L'étude met en évidence plusieurs risques. La mondialisation et le changement technologique peuvent accentuer les disparités régionales, car les régions économiquement plus fortes sont mieux préparées à exploiter les nouvelles technologies, stimulant ainsi l'innovation et la croissance. La transition

démographique représente un défi pour les régions de l'UE, en particulier celles confrontées au vieillissement de la population et à la diminution de la main-d'œuvre. La transition vers une économie neutre en carbone présente des risques pour les régions dépendantes de l'extraction des combustibles fossiles, mais elle offre également des opportunités pour celles ayant un potentiel de production d'énergies renouvelables.

L'étude propose plusieurs recommandations pour faire face à ces risques liés à des transitions multiples, notamment une approche dynamique du développement régional ; des investissements ciblés dans les régions moins développées afin de créer de nouvelles opportunités basées sur les sources d'énergie renouvelables ; un financement accru pour un soutien efficace ; la cohésion comme objectif commun à toutes les politiques de l'UE; une approche coordonnée du développement ; et le renforcement des capacités des autorités pour répondre aux défis émergents.

German

Die Studie untersucht die Zukunft der Kohäsionspolitik der EU im Kontext von drei Herausforderungen: Globalisierung und technologischer Fortschritt, demografischer Wandel und der Übergang zu einer klimaneutralen Wirtschaft. Um die Auswirkungen dieser Herausforderungen auf die verschiedenen Regionen der EU zu bewerten, führt die Studie eine Analyse der regionalen Verwundbarkeit durch, verwendet vier makroökonomische Modelle zur Prognose möglicher wirtschaftlicher Entwicklungen und untersucht anhand von Fallstudien die lokalen Reaktionen auf diese Herausforderungen.

Die Studie hebt mehrere Risiken hervor. Globalisierung und technologischer Wandel können regionale Disparitäten verstärken, da wirtschaftlich stärkere Regionen besser darauf vorbereitet sind, neue Technologien zu nutzen, was Innovation und Wachstum fördert. Der demografische Wandel stellt für viele Regionen der EU eine Herausforderung dar, insbesondere für diejenigen, die mit einer alternden Bevölkerung und einer schrumpfenden Erwerbsbevölkerung konfrontiert sind. Der Übergang zu einer klimaneutralen Wirtschaft birgt Risiken für Regionen, die von der Förderung fossiler Brennstoffe abhängig sind, bietet aber auch Chancen für Regionen mit Potenzial zur Erzeugung erneuerbarer Energien.

Die Studie schlägt mehrere Empfehlungen zur Bewältigung dieser Risiken im Zusammenhang mit den mehrfachen Übergängen vor, darunter ein dynamischer Ansatz für die regionale Entwicklung, gezielte Investitionen in weniger entwickelte Regionen zur Schaffung neuer Möglichkeiten auf Basis erneuerbarer Energien, eine Erhöhung der Finanzierung für wirksame Unterstützung, Kohäsion als gemeinsames Ziel aller EU-Politiken, ein koordinierter Entwicklungsansatz sowie der Ausbau der Kapazitäten der Behörden zur Bewältigung neuer Herausforderungen.

Executive summary

Introduction

The study delves into the future landscape of EU Cohesion Policy, set against the backdrop of three significant challenges: globalisation and technological advancements, shifting demographic trends, and the transition to a climate-neutral economy. To assess the impacts of these challenges on various EU regions, the study performs a regional vulnerability analysis and utilises four macroeconomic models, as well as a global economic model to forecast developments in the world economy. Furthermore, the analysis is enriched by in-depth case studies that examine the on-the-ground perceptions and responses to these three challenges in specific Member States and regions, providing a nuanced understanding of the complexities at play.

Strands of Analysis

Regional vulnerability to challenges

The vulnerability of regions to the three challenges is assessed using a composite index of statistical indicators that capture the regions' exposure, sensitivity, and adaptive capacity, revealing a strong correlation with regional development levels, as measured by GDP per capita. The analysis yields two key findings: first, it highlights the complex interplay of factors that contribute to a region's vulnerability to these challenges; and second, it elucidates the relationship between these factors and regional GDP per capita. Notably, the latter finding suggests that EU Cohesion Policy, which allocates support inversely to regional GDP per capita, is well-positioned to mitigate the vulnerability of regions to these challenges, thereby potentially enhancing their resilience.

Modelling and projected longer-term impacts of challenges on regions

The second part of the study assesses the future impact of the three challenges on regional GDP per head across the EU. Specifically, four macroeconomic models - EU-EMS, MASST-5, E3ME and GEM-E3 – were used to generate projections of their differential effect on regional economies up to 2035 under alternative assumptions about the future direction of development of the EU and the global economy.

With increasing globalisation and technological change, the projections suggest that deeper global integration - characterised by increasing world trade and investment flows - is likely to stimulate economic growth in the EU. However, this

growth may be accompanied by a greater concentration of economic activity in core areas, potentially exacerbating regional disparities across the EU. The impact of increasing global integration on individual regions will depend on their competitiveness, innovation potential, and connectivity to global value chains.

In contrast, a scenario of further global fragmentation, marked by a slowdown in world trade, could lead to the reshoring of previously EU offshored activities, potentially benefiting less developed regions. Moreover, a decline in global trade and investment flows may have a disproportionately negative impact on more developed and transition regions in the EU, relative to less developed regions. This, in turn, could contribute to a narrowing of regional disparities, not as a result of accelerated growth in less developed regions, but rather due to sluggish overall EU growth, with many more developed regions experiencing reduced growth rates.

Across all scenarios, globalisation and technological change pose a risk of exacerbating regional disparities within the EU, as economically stronger regions are better equipped to absorb and leverage new technologies, driving innovation and faster growth. This, in turn, may further widen the gap between stronger and weaker regions.

Interestingly, deeper EU integration may also contribute to widening regional disparities, albeit through a different mechanism. As cooperation and joint ventures increase, activities may become more concentrated in the more developed regions, where higher productivity and greater competitiveness can be expected to attract further investment and talent. This could potentially strengthen EU competitiveness as a whole, but at the cost of increasing regional inequalities.

Projections of the demographic challenge suggest that migration to more developed regions may initially suppress GDP per capita as labour markets adjust to the influx of new residents and production capacity expands to accommodate them. In contrast, less developed regions experiencing population outflows may see a short-term increase in GDP per capita, as the remaining population benefits from a more favourable demographic ratio. However, this trend is likely to be reversed in the long term, as the emigration of young and highly skilled individuals erodes the region's productive capacity and ultimately leads to a decline in GDP per capita. Overall, increased population mobility between regions is likely to exacerbate regional disparities, as more developed regions continue to attract talent and investment, while less developed regions struggle with depopulation and a dwindling workforce.

The projected impact of the transition to a climate-neutral economy on regional disparities in the EU is contingent upon several key factors, including the financing mechanisms for the necessary investments, the pace of carbon emission reductions, and the geographical location of renewable energy development. On one hand, the green transition presents an opportunity for less

developed regions, particularly in Southern Europe, to leverage their relatively low energy dependence and significant potential for renewable energy production, potentially driving economic growth and convergence. On the other hand, more developed regions may possess the necessary resources, expertise, and infrastructure to adapt more swiftly to the challenges of the transition, enabling them to take the lead in emerging transition-related industries and services. The net effect on regional disparities will ultimately depend on the interplay between these competing dynamics, highlighting the need for targeted policies to ensure that the transition benefits all regions and minimises potential disparities.

Case studies analysis of selected Member States and regions

To supplement the model-based analysis, a comprehensive set of case studies of 41 regions in 13 EU Member States was conducted by national experts using a standardised framework. This investigation examined how regional authorities and stakeholders perceive the three challenges and the measures being taken or planned to address them.

The primary risks associated with globalisation and technological change, as identified by interviewees, and focus group participants, include:

- Global value chain risks, arising from three key factors: (1) a high dependence on global value chains in highly globalised Member States, which can make them vulnerable to external shocks; (2) limited domestic growth opportunities in economies that rely heavily on foreign direct investment, which can lead to a lack of economic diversification; and (3) a specialisation in low- and medium-value-added products and services in less export-oriented Member States, which can limit their potential for economic upgrading.
- Productivity risks, as some Member States exhibit low productivity or growth relative to other EU countries and international peers.
- Technological competitiveness risks, due to difficulties in keeping pace with technological advancements in critical sectors, as well as limited research and innovation capacity and low EU funding for research and development (RTD) in less prosperous Member States.
- Labour market constraints, resulting from labour shortages and a scarcity of high-skilled workers.
- Persistent interregional disparities, driven by a polarisation between capital city regions or economic centres and other areas.

In response to these challenges, EU regions are implementing similar policies, albeit with varying priorities. These initiatives include increased investment in RTD, efforts to foster closer links between research centres and businesses,

measures to enhance the competitiveness of small and medium-sized enterprises (SMEs), strategies to capitalise on the green transition, digitalisation, and reductions in skills mismatches.

These efforts are often integrated into national and regional plans to improve competitiveness, such as Smart Specialisation Strategies, which aim to develop activities with potential comparative advantages. However, despite widespread recognition of the challenges and the need for a response, the case studies reveal that the actions taken or planned are frequently fragmented and lack a clear underlying logic, making it difficult to understand how different strategy elements fit together to achieve a cohesive response.

The demographic challenge is widely recognised, with a shared understanding of the implications of low birth rates, increased life expectancy, and declining working-age populations. There is a pervasive concern about the sustainability of pension systems, the provision of appropriate access to services ie healthcare and social care for an aging population, and the potential for labour shortages. Additionally, there are worries about the integration of migrants, who may offer a solution to these challenges, and the difficulties that arise from population movements within the EU, such as depopulation in rural areas and brain drain in regions with limited job opportunities, inadequate infrastructure, and scarce public services and social amenities.

In response to these demographic shifts, national and regional plans largely accept population aging as a given and focus on implementing adaptive measures. These measures include leveraging digitalisation to enhance public healthcare and social services, promoting remote service provision, and encouraging active aging through increased labour force participation. Furthermore, efforts are being made to support work-life balance for women and promote their participation in the labour market. In contrast, migration and population movement are being addressed more proactively, with policies aimed at attracting and retaining skilled labour, enhancing the employability and productivity of both domestic and migrant workers, and fostering a more inclusive and integrated labour market.

The transition to a climate-neutral economy across the EU has a profoundly varied regional impact, influenced by factors such as climate, land use, infrastructure, economic activity composition, existing energy supply and consumption patterns. Case studies have highlighted several key challenges, including dependence on energy-intensive industries, the complexities of phasing out coal and lignite, transitioning to clean transport systems, improving building energy efficiency, and adopting green technologies.

It is widely acknowledged that regions heavily reliant on fossil fuel extraction for income and employment, such as Poland, Greece, Slovenia, and Germany, require significant support and time to restructure their economies and diversify

into other sectors. However, the broader range of difficulties faced by other regions often receives insufficient attention in national and regional plans.

In principle, all EU Member States, except Poland, have committed to achieving climate neutrality by 2050 through various measures, including land use changes to create carbon sinks (e.g., Finland), renovating buildings to enhance energy efficiency (e.g., Romania), implementing legislation and incentives to reduce fossil fuel use (e.g., Slovenia), and requiring regional action plans (e.g., Portugal). Research and innovation are prominent features of many national and regional plans, with nearly all EU smart specialisation strategies incorporating support for the green transition.

However, few plans provide detailed explanations of how carbon neutrality will be achieved in practice or how the substantial costs associated with this transition (estimated at €3 trillion in France and €2.1 trillion in Romania, for example) will be financed. External events, such as Russia's aggression and the widespread resistance across the EU to taxes, charges, and other measures aimed at reducing greenhouse gas emissions, can undermine planned actions or even lead to reversals. Notably, plans often lack specific strategies for changing individual and corporate behaviour, which is crucial for achieving net-zero emissions by 2050.

The case studies reveal several overarching issues that are common to all three challenges:

- The regional response is heavily influenced by the national context and central government policies, including those related to the macro-economy, social welfare, healthcare, education, migration, and other areas. This highlights the need for coordinated and aligned policy efforts at both national and regional levels.
- Regional and local authorities often face significant limitations in designing and implementing effective policy responses, which can hinder their ability to address the challenges.
- The territorial scope for action may transcend regional boundaries, requiring cross-border cooperation and coordination, or may be more localised, involving areas smaller than NUTS2 or NUTS3 regions. This underscores the importance of tailor-made solutions, of flexibility and adaptability in responding to the challenges.
- The complexity of funding sources and programming can lead to duplication of efforts, inefficiencies, and ineffective responses to the challenges.

Furthermore, the case studies emphasise that less developed regions require support not only to mitigate the negative impacts of the challenges but also to capitalise on the opportunities they present. This is particularly true for the green transition, where these regions have a unique chance to develop renewable

energy sources. However, to ensure that the benefits of this transition are sustainable, it is essential to provide targeted support to help these regions develop activities and industries that leverage these new energy sources. By doing so, the potential of the green transition can be fully realised, and the benefits can be long-lasting.

Key Messages and Forward-looking Recommendations

The study highlights several risks and risk patterns for regions when exposed to the three challenges of globalisation and technological change, demographic transition, and climate transition, which vary depending on the region and its category.

Potential Future Risks for Regional Balanced Development

Regional vulnerability to future challenges varies substantially and highly depends on a region's geographic, economic, and social context. At the same time, the close correlation between the regions' vulnerability and their level of economic development showcases Cohesion Policy as an effective tool to enhance resilience.

Globalisation and technological change

Globalisation and technological change pose a risk of exacerbating regional disparities within the EU in the future, as economically stronger regions are better equipped to absorb and leverage new technologies, driving innovation and faster growth.

In contrast, less developed regions may face significant challenges in responding to globalisation and technological change, including limited access to funding, inadequate infrastructure, and a lack of skilled workforce. These regions may also be more vulnerable to the risks associated with global value chains, such as dependence on external markets and suppliers, and may experience a decline in economic activity if global trade slows down. Additionally, the study notes that regions with limited economic diversification, such as those heavily reliant on a single industry or sector, may be more exposed to the risks associated with globalisation and technological change.

Despite widespread recognition of the challenge and the need to improve regional competitiveness, the case studies reveal that the actions taken or planned at regional and national level are frequently fragmented and lack a clear underlying logic, requiring further coordination between EU, national and regional policies and funds.

Demographic transition

The demographic transition poses significant challenges to EU regions, particularly those with aging populations and declining workforces, increasing regional disparities in the long run. Regions with low birth rates and limited migration may experience a decline in population, leading to a reduction in the workforce and a decrease in economic activity. For example, rural areas and peripheral regions may be more vulnerable to depopulation, as young and highly skilled individuals may migrate to urban areas in search of better job opportunities. In contrast, regions with high migration rates may experience population growth, but face challenges in integrating new residents and providing adequate public services and social amenities.

Hence, demographic shifts are likely in the future to exacerbate regional disparities, as more developed regions attract and retain talent, as well as investments, while less developed regions struggle with depopulation and a dwindling workforce. According to the analysis, while an initial large population influx may have negative effects, more developed regions are likely to benefit in the long run, as they continue to draw in skilled workers and investments, thereby reinforcing their economic advantage. In contrast, less developed regions face a vicious cycle of decline, as they experience a brain drain, with young and highly skilled individuals migrating to more prosperous areas, leaving behind a shrinking and aging population, which further erodes their economic base and exacerbates regional disparities.

In response to these challenges, Member States and regions have adopted different approaches. While population aging is largely viewed as inevitable, with a focus on adapting to its consequences, migration is addressed more proactively, with policies aimed at attracting skilled labour, improving employability, and fostering an inclusive labour market.

However, to mitigate the risks of increased regional disparities caused by demographic transition, targeted policies are needed to support less developed regions, address the root causes of depopulation, and promote more balanced regional development. This can help ensure a more equitable distribution of opportunities and resources across the EU and reduce the economic and social impacts of demographic shifts.

Transition to a climate-neutral economy

The transition to a climate-neutral economy presents risks for regions, particularly those heavily reliant on fossil fuel extraction for income and employment, which may require significant support and time to restructure their economies and diversify into other sectors. For instance, regions with a high dependence on coal or lignite may face significant challenges in transitioning to a low carbon economy

and may require targeted support to develop new industries and create new job opportunities.

However, it also presents opportunities for regions with potential for renewable energy production, such as those with abundant wind or solar resources. These regions may have opportunities to develop new industries and create new job opportunities but may also face challenges in developing the necessary infrastructure and skills to support these new industries.

In practice, the financing of the green transition remains uncertain, and national and regional plans often lack clear, targeted strategies to address this challenge. Moreover, the green transition requires widespread societal consensus, which can only be attained if the distribution of costs and benefits is fair and just.

Forward-looking recommendations for addressing these triple transition risks

Against this background of increased risks for the regions' development, the study puts forward a number of recommendations and ways forward on how to tackle these risks of multiple transitions and mega trends:

- The risks and risk patterns for regions when exposed to the three challenges of globalisation and technological change, demographic transition, and climate transition vary depending on the region and its category. Looking forward, the study suggests that a tailored approach to regional development is necessary, taking into account the unique characteristics and needs of each region, and that policymakers must be aware of the potential risks and challenges associated with these transitions in order to develop effective policies to support regional development and reduce regional disparities.
- Dynamic approaches to regional development: The study's results reveal that the impacts of the challenges on regions do not align neatly with traditional indicators such as GDP per head or existing regional categorisation. This suggests that a more nuanced and dynamic approach to regional development is necessary, one that takes into account the unique challenges and opportunities faced by different regions. To effectively address these diverse territorial challenges, the EU may need to adapt its current system of categories of regions under Cohesion Policy and render its funding more targeted. By adopting a more adaptive and responsive approach to regional development, Cohesion Policy can better support regions in addressing their unique challenges and unlocking their full potential.
- Reorienting Cohesion Policy to address intra-regional disparities: The growing trend of intra-regional disparities across the EU necessitates a fundamental reassessment of Cohesion Policy's focus and territorial scope. The current NUTS-2 level approach may no longer be sufficient to

address the complexities of regional development, as it often masks significant intra-regional disparities. To effectively tackle these disparities, Cohesion Policy must adopt a more nuanced and targeted approach, acknowledging the diverse needs and challenges within regions. This may involve shifting the policy's focus towards sub-regional or local levels, enabling more tailored interventions and a more effective reduction of intra-regional disparities.

- The green transition necessitates substantial investments in renewable energy, energy efficiency, and sustainable infrastructure, which can be a significant financial burden for some regions, particularly those heavily dependent on fossil fuels. Although Cohesion Policy cannot solely cover the funding requirements of the green transition, it can play a vital role in supporting Member States and regions in overcoming these challenges and ensuring a just and equitable transition. Through targeted investments, Cohesion Policy can enable less developed regions to develop the necessary energy-generating infrastructure and create new economic opportunities based on renewable energy sources. Furthermore, Cohesion Policy can support the significant upskilling and reskilling required for a low-carbon economy, empowering businesses, and workers to adapt to the evolving job market and thrive in a sustainable economy.
- Achieving a net-zero future by 2050 demands a broad societal consensus on the urgency of climate action. Cohesion Policy can contribute to building this consensus by promoting a fair and equitable distribution of the costs and benefits of the transition. By providing support to those most affected, Cohesion Policy can alleviate concerns, address potential social and economic impacts, and facilitate a smoother transition. Ultimately, this support is essential for persuading individuals, businesses, and communities to embrace the necessary behavioural changes and accept the implications of a low-carbon future. By fostering a sense of shared responsibility and collective benefit, Cohesion Policy can help create a societal momentum that drives the transition towards a more sustainable and climate-resilient future.
- Enhanced funding for effective support: Meeting the triple challenges of the green transition, globalisation, and technological and demographic change would require a significant expansion of Cohesion Policy funding, particularly in the context of deeper economic integration in the EU. This would enable them to invest in sustainable infrastructure, drive innovation, and develop the skills and competencies required for a rapidly changing world. However, in the face of budgetary constraints and emerging challenges, Cohesion Policy must also adapt and prioritise its efforts to maximise impact where it is needed most.
- Cohesion as a shared EU objective: Reducing regional disparities across the EU requires a concerted effort that goes beyond Cohesion Policy

alone. Sectoral policies at both the European and national levels must be designed with spatial awareness, taking into account their potential territorial impact, and ensuring that they complement Cohesion Policy's objectives. By adopting a territorial perspective, EU policies can be more effective in addressing regional challenges and promoting inclusive growth.

- A coordinated, strategic approach to development: To achieve a comprehensive approach to regional development, Cohesion Policy must be closely aligned with national and sub-national development policies. This includes aligning Cohesion Policy with long-term strategies for reducing carbon emissions, promoting digitalisation, and addressing demographic change. On the other hand, the success of such strategic approach requires an enhanced policy coherence combining and coordinating place-based and sectoral policies, supporting the development of all regions, regardless of their economic prosperity. By adopting such an approach, policymakers can help bridge the gap between more and less developed regions, fostering more inclusive and sustainable growth.
- Enhancing capacity to respond to emerging challenges and opportunities: The study highlighted concerns about regional authorities' capacity to address emerging challenges, particularly among smaller ones. Cohesion Policy can help strengthen the capacity of regional authorities by building their skills and expertise to tackle the green transition, digitalisation, and demographic change, and by adopting a more flexible and adaptive approach that empowers innovation and provides necessary resources.
- Unlocking the potential of regions also requires recognising the long-term nature of this process and the corresponding timescale for policy support. Fundamental economic transformations in regions can take decades to achieve, and therefore, a sustained, long-term approach to development and growth is necessary. In this regard, the EU's Cohesion Policy is well-suited to provide the necessary policy framework and long-term funding, with its 7-year programming periods and the possibility of extending projects over multiple periods.

Résumé Exécutif

Introduction

L'étude examine le paysage futur de la politique de cohésion de l'UE, dans le contexte de trois défis majeurs : la mondialisation et les avancées technologiques, les évolutions démographiques et la transition vers une économie neutre en carbone. Afin d'évaluer les impacts de ces défis sur différentes régions de l'UE, l'étude réalise une analyse de la vulnérabilité régionale et utilise quatre modèles macroéconomiques ainsi qu'un modèle économique global pour prévoir l'évolution de l'économie mondiale. En outre, l'analyse est enrichie par des études de cas approfondies qui examinent les perceptions locales et les réponses de terrain à ces trois défis dans certains États membres et régions, offrant une compréhension nuancée des complexités en jeu.

Axes d'Analyse

Vulnérabilité régionale aux défis

La vulnérabilité des régions face aux trois défis est évaluée à l'aide d'un indice composite d'indicateurs statistiques qui capturent l'exposition, la sensibilité et la capacité d'adaptation des régions, révélant une forte corrélation avec les niveaux de développement régional mesurés par le PIB par habitant. L'analyse aboutit à deux conclusions principales : premièrement, elle met en évidence l'interaction complexe des facteurs contribuant à la vulnérabilité d'une région face à ces défis ; et deuxièmement, elle éclaire la relation entre ces facteurs et le PIB régional par habitant. En particulier, cette dernière conclusion suggère que la politique de cohésion de l'UE, qui alloue un soutien inversement proportionnel au PIB régional par habitant, est bien positionnée pour atténuer la vulnérabilité des régions face à ces défis, renforçant ainsi potentiellement leur résilience.

Modélisation et projections des impacts à long terme des défis sur les régions

La seconde partie de l'étude évalue l'impact futur des trois défis sur le PIB régional par habitant à travers l'UE. Plus précisément, quatre modèles macroéconomiques - EU-EMS, MASST-5, E3ME et GEM-E3 - ont été utilisés pour générer des projections de leurs effets différenciés sur les économies régionales d’ici à 2035, sous différentes hypothèses concernant l'évolution future de l'UE et de l'économie mondiale.

Avec l'augmentation de la mondialisation et du changement technologique, les projections suggèrent qu'une intégration mondiale approfondie - caractérisée par une augmentation du commerce mondial et des flux d'investissement - est susceptible de stimuler la croissance économique dans l'UE. Cependant, cette croissance pourrait s'accompagner d'une plus grande concentration de l'activité économique dans les zones dites centrales, exacerbant potentiellement les disparités régionales à travers l'UE. L'impact d'une intégration mondiale accrue sur les régions prises individuellement dépendra de leur compétitivité, de leur potentiel d'innovation et de leur connexion aux chaînes de valeur mondiales.

À l'inverse, un scénario de fragmentation au niveau mondial, marqué par un ralentissement du commerce international, pourrait entraîner la relocalisation d'activités précédemment délocalisées hors de l'UE, bénéficiant potentiellement aux régions moins développées. De plus, une baisse des flux commerciaux et d'investissements mondiaux pourrait avoir un impact disproportionnellement négatif sur les régions plus développées et les régions en transition de l'UE, par rapport aux régions moins développées. Cela pourrait contribuer à une réduction des disparités régionales, non pas en raison d'une croissance accélérée des régions moins développées, mais plutôt en raison d'une croissance globale plus lente dans l'UE, de nombreuses régions plus développées connaissant une baisse de leur taux de croissance.

Dans tous les scénarios, la mondialisation et le changement technologique présentent un risque d'aggravation des disparités régionales au sein de l'UE, car les régions économiquement plus fortes sont mieux équipées pour absorber et exploiter les nouvelles technologies, stimulant ainsi l'innovation et une croissance plus rapide. Cela pourrait encore élargir l'écart entre les régions plus et moins développées.

Il est intéressant de noter qu'une intégration plus poussée de l'UE peut également contribuer à accroître les disparités régionales, mais par le biais d'un mécanisme différent. À mesure que la coopération et les partenariats entre entreprises se développent, les activités économiques peuvent se concentrer davantage dans les régions les plus développées, où l'on peut s'attendre à ce qu'une productivité plus élevée et une plus grande compétitivité attirent davantage d'investissements et de talents. Cela pourrait potentiellement renforcer la compétitivité de l'UE dans son ensemble, mais au prix d'une augmentation des inégalités régionales.

Les projections relatives au défi démographique suggèrent que les migrations vers les régions plus développées pourraient, dans un premier temps, réduire le PIB par habitant, dans la mesurer où les marchés du travail s'adaptent à l'afflux de nouveaux résidents et les capacités de production s'accroissent pour les accueillir. En revanche, les régions moins développées qui voient leur population émigrer peuvent faire l'expérience d'une augmentation de leur PIB par habitant à court terme, car la population restante bénéficie d'un ratio démographique plus favorable. Toutefois, cette tendance est susceptible de s'inverser à long terme, car l'émigration des jeunes et des personnes hautement qualifiées érode la

capacité de production de la région et entraîne finalement une baisse du PIB par habitant. Dans l'ensemble, une mobilité accrue de la population entre les régions est susceptible d'exacerber les disparités régionales, car les régions plus développées continuent d'attirer les talents et les investissements, tandis que les régions moins développées luttent contre le dépeuplement et la diminution de la main-d'œuvre.

L'impact anticipé de la transition vers une économie climatiquement neutre sur les disparités régionales dans l'UE dépend de plusieurs facteurs clés, notamment les mécanismes de financement des investissements nécessaires, le rythme des réductions des émissions de carbone et la localisation géographique du développement des énergies renouvelables. D'une part, la transition verte offre aux régions moins développées, en particulier en Europe du Sud, la possibilité de tirer parti de leur dépendance énergétique relativement faible et de leur important potentiel de production d'énergies renouvelables, ce qui pourrait stimuler la croissance économique et la convergence. D'autre part, les régions plus développées peuvent posséder les ressources, l'expertise et l'infrastructure nécessaires pour s'adapter plus rapidement aux défis de la transition, ce qui leur permet de prendre la tête des industries et des services émergents liés à la transition. L'effet net de cette transition sur les disparités régionales dépendra en fin de compte de l'interaction entre ces dynamiques concurrentes, soulignant la nécessité de politiques ciblées pour s’assurer que la transition profite à toutes les régions et minimise les disparités potentielles.

Études de cas portant sur une sélection d’États membres et régions

Afin de compléter le travail de modélisation, une analyse détaillée de 41 régions dans 13 États membres de l'UE a été menée par des experts nationaux selon un cadre standardisé. Cette étude a examiné la manière dont les autorités et les parties prenantes régionales perçoivent les trois défis et les mesures prises ou prévues pour y répondre.

Les principaux risques associés à la mondialisation et au changement technologique, identifiés par les personnes interrogées et les participants aux groupes de discussion, comprennent :

- Risques liés aux chaînes de valeur mondiales : une forte dépendance aux chaînes de valeur mondiales dans les États membres fortement mondialisés, ce qui peut les rendre vulnérables aux chocs externes ; des opportunités de croissance domestiques limitées dans les économies fortement dépendantes des investissements étrangers, ce qui peut mener à un manque de diversification économqiue ; et une spécialisation dans des produits et services à faible et moyenne valeur ajoutée dans les États membres qui sont moins orientés vers l'exportation, ce qui peut limiter leur potentiel de perfectionnement économique.

- Risques liés à la productivité : certains États membres affichent une faible productivité ou une croissance inférieure à celle des autres pays de l'UE et des concurrents internationaux.
- Risques liés à la compétitivité technologique : difficultés à suivre le rythme des avancées technologiques dans des secteurs critiques, capacité de recherche et d'innovation limitée, et faible financement de la R&D dans les États membres les moins prospères.
- Contraintes du marché du travail : pénurie de main-d'œuvre et manque de travailleurs hautement qualifiés.
- Disparités interrégionales persistantes : polarisation entre les régions des capitales ou les centres économiques et les autres zones.

En réponse à ces défis, les régions de l'UE mettent en œuvre des politiques similaires, bien qu'avec des priorités différentes. Ces initiatives comprennent des investissements accrus dans la recherche et le développement technologique, des efforts pour promouvoir des liens plus étroits entre les centres de recherche et les entreprises, des mesures visant à renforcer la compétitivité des petites et moyennes entreprises (PME), des stratégies visant à capitaliser sur la transition verte, de la numérisation et de la réduction de l'inadéquation des compétences.

Ces efforts sont souvent intégrés dans des plans nationaux et régionaux visant à améliorer la compétitivité, tels que les stratégies de spécialisation intelligente, qui visent à développer des activités présentant des avantages comparatifs potentiels. Toutefois, bien que les défis et la nécessité d'y répondre soient largement reconnus, les études de cas révèlent que les mesures prises ou prévues sont souvent fragmentées et manquent d'une logique sous-jacente claire, ce qui rend difficile de voir comment les différents éléments de ces stratégies s’imbriquent pour apporter une réponse cohérente.

Le défi démographique est largement reconnu, avec une compréhension partagée des implications de faibles taux de natalité, de l'augmentation de l'espérance de vie et du déclin de la population en âge de travailler. Il existe une préoccupation généralisée concernant la viabilité des systèmes de retraite, l'accès aux services de santé et de soins sociaux pour une population vieillissante, ainsi que la pénurie de main-d'œuvre potentielle. De plus, des inquiétudes existent quant à l'intégration des migrants, qui pourraient offrir une solution à ces défis, et aux difficultés engendrées par les mouvements de population au sein de l'UE, comme le dépeuplement des zones rurales et la fuite des cerveaux dans les régions où les opportunités d'emploi sont limitées, les infrastructures inadéquates, et les services publics et équipements sociaux insuffisants.

En réponse à ces évolutions démographiques, les plans nationaux et régionaux acceptent largement le vieillissement de la population comme un fait établi et se concentrent sur la mise en œuvre de mesures d'adaptation. Ces mesures

comprennent l'utilisation de la numérisation pour améliorer les services de santé et sociaux, la promotion de la prestation de services à distance et l'encouragement du vieillissement actif par une participation accrue au marché du travail. Par ailleurs, des efforts sont déployés pour maintenir l'équilibre entre vie professionnelle et vie privée des femmes et promouvoir leur participation au marché du travail. En revanche, les questions de migration et de mouvements de population sont abordées de manière plus proactive, avec des politiques visant à attirer et retenir la main-d'œuvre qualifiée, à améliorer l'employabilité et la productivité des travailleurs nationaux et migrants, et à favoriser un marché du travail plus inclusif et intégré.

La transition vers une économie neutre en carbone dans l'UE a un impact territorial très varié, influencé par des facteurs tels que le climat, l'utilisation des terres, les infrastructures, la composition de l'activité économique et les schémas existants d'approvisionnement et de consommation énergétique. Les études de cas ont mis en évidence plusieurs défis clés, notamment la dépendance aux industries à forte intensité énergétique, la complexité de l'abandon du charbon et du lignite, la transition vers des systèmes de transport propres, l'amélioration de l'efficacité énergétique des bâtiments et l'adoption de technologies vertes.

Il est largement admis que les régions fortement dépendantes de l'extraction de combustibles fossiles pour leurs revenus et leurs emplois, comme la Pologne, la Grèce, la Slovénie et l'Allemagne, nécessitent un soutien et du temps considérables pour restructurer leurs économies et se diversifier vers d'autres secteurs. Cependant, l'éventail plus large de difficultés auxquelles d'autres régions sont confrontées reçoit souvent une attention insuffisante dans les plans nationaux et régionaux.

En principe, tous les États membres de l'UE, à l'exception de la Pologne, se sont engagés à atteindre la neutralité climatique d'ici 2050 par diverses mesures, notamment des changements dans l'utilisation des terres pour créer des puits de carbone (ex : Finlande), la rénovation des bâtiments pour améliorer leur efficacité énergétique (ex : Roumanie), la mise en œuvre de législations et d'incitations pour réduire l'utilisation des combustibles fossiles (ex: Slovénie), et l'exigence de plans d'action régionaux (ex : Portugal). La recherche et l'innovation occupent une place importante dans de nombreux plans nationaux et régionaux, presque toutes les stratégies de spécialisation intelligente de l'UE intégrant un soutien à la transition verte.

Cependant, peu de plans expliquent en détail comment la neutralité carbone sera atteinte en pratique ou comment les coûts substantiels associés à cette transition (estimés à 3 000 milliards d'euros en France et 2 100 milliards d'euros en Roumanie, par exemple) seront financés. Des événements externes, tels que l'agression de la Russie et la résistance généralisée au sein de l'UE aux taxes, redevances et autres mesures visant à réduire les émissions de gaz à effet de serre, peuvent compromettre les actions prévues ou même entraîner des revirements. Notamment, les plans manquent souvent de stratégies spécifiques

pour modifier le comportement des individus et des entreprises, ce qui est crucial pour atteindre un niveau d'émissions nettes nul d'ici 2050.

Les études de cas révèlent plusieurs problèmes transversaux communs aux trois défis :

- La réponse régionale est fortement influencée par le contexte national et les politiques du gouvernement central, y compris celles liées à la macroéconomie, à la protection sociale, à la santé, à l'éducation et à la migration. Cela souligne la nécessité d'un effort coordonné et aligné aux niveaux national et régional.
- Les autorités régionales et locales font souvent face à des restrictions significatives dans la conception et la mise en œuvre de réponses politiques efficaces, ce qui peut entraver leur capacité à s'attaquer aux défis.
- La portée territoriale des actions peut dépasser les frontières régionales, nécessitant une coopération et une coordination transfrontalières, ou être plus localisée, impliquant des zones plus petites que les régions NUTS2 ou NUTS3. Cela met en avant l'importance de solutions conçues sur mesure, ainsi que de la flexibilité et de l'adaptabilité dans la manière de répondre aux défis.
- La complexité des sources de financement et des programmes peut entraîner des duplications d'efforts, des inefficacités et des réponses inadaptées aux défis.

Enfin, les études de cas soulignent que les régions moins développées nécessitent un soutien non seulement pour atténuer les impacts négatifs des défis, mais aussi pour tirer parti des opportunités qu'ils présentent, notamment dans la transition verte où ces régions ont une chance unique de développer des sources d'énergie renouvelables. Toutefois, pour que les avantages de cette transition soient durables, il est essentiel de fournir un soutien ciblé pour aider ces régions à développer des activités et des industries qui tirent profit de ces nouvelles sources d'énergie. C'est ainsi que le potentiel de la transition verte pourra être pleinement exploité et que les bénéfices pourront être durables.

Messages Clés et Recommandations Prospectives

L'étude met en exergue plusieurs risques et schémas de risques pour les régions lorsqu'elles sont exposées aux trois défis de la mondialisation et du changement technologique, de la transition démographique et de la transition climatique, qui varient en fonction de la région et de sa catégorie.

Risques futurs potentiels pour un développement régional équilibré

La vulnérabilité régionale aux défis futurs varie considérablement et dépend fortement du contexte géographique, économique et social d'une région. Dans le même temps, la forte corrélation entre la vulnérabilité des régions et leur niveau de développement économique montre que la politique de cohésion est un outil efficace pour renforcer la résilience.

Mondialisation et changement technologique

La mondialisation et le changement technologique présentent un risque d'aggravation des disparités régionales au sein de l'UE à l'avenir, car les régions économiquement plus fortes sont mieux équipées pour absorber et exploiter les nouvelles technologies, stimulant ainsi l'innovation et une croissance plus rapide.

A l’inverse, les régions moins développées peuvent rencontrer des difficultés importantes pour répondre à la mondialisation et au changement technologique, notamment un accès limité au financement, des infrastructures inadéquates et un manque de main-d'œuvre qualifiée. Ces régions peuvent également être plus vulnérables aux risques liés aux chaînes de valeur mondiales, comme la dépendance aux marchés et fournisseurs extérieurs, et peuvent voir leur activité économique décliner si le commerce mondial ralentit. De plus, l'étude note que les régions ayant une diversification économique limitée, comme celles fortement dépendantes d'une seule industrie ou d'un seul secteur, peuvent être plus exposées aux risques associés à la mondialisation et au changement technologique.

Bien que ce défi et la nécessité d'améliorer la compétitivité régionale soient largement reconnus, les études de cas révèlent que les mesures prises ou prévues aux niveaux régional et national sont souvent fragmentées et manquent d'une logique sous-jacente claire, ce qui nécessite une plus grande coordination entre les politiques et les fonds européens, nationaux et régionaux.

Transition démographique

La transition démographique pose des défis importants aux régions de l'UE, en particulier celles confrontées au vieillissement de la population et à la diminution de la main-d'œuvre, ce qui augmente les disparités régionales à long terme. Les régions connaissant de faibles taux de natalité et une migration limitée peuvent voir leur population diminuer, entraînant une réduction de la main-d'œuvre et une baisse de l'activité économique. Les zones rurales et les régions périphériques peuvent être particulièrement vulnérables à la dépopulation, car les jeunes et les personnes hautement qualifiées peuvent migrer vers les zones urbaines à la recherche de meilleures opportunités d'emploi. En revanche, les régions ayant des taux de migration élevés peuvent connaître une croissance démographique,

mais doivent faire face à des défis liés à l'intégration des nouveaux résidents et à la fourniture de services publics et équiepements sociaux adéquats.

Ainsi, les évolutions démographiques sont susceptibles d'exacerber les disparités régionales à l'avenir, les régions plus développées attirant et retenant les talents et les investissements, tandis que les régions moins développées luttent contre la dépopulation et une main-d'œuvre en déclin. L'analyse montre que si un afflux initial important de population peut avoir des effets négatifs, les régions plus développées sont susceptibles d'en bénéficier à long terme, car elles continuent d'attirer des travailleurs qualifiés et des investissements, renforçant ainsi leur avantage économique. En revanche, les régions moins développées sont confrontées à un cercle vicieux de déclin, car elles souffrent d'une fuite des cerveaux, les jeunes et les personnes hautement qualifiées migrant vers des régions plus prospères, laissant derrière eux une population vieillissante et en déclinante, ce qui érode davantage leur base économique et exacerbe les disparités régionales.

En réponse à ces défis, les États membres et les régions ont adopté des approches différentes. Alors que le vieillissement de la population est largement considéré comme inévitable et que l'accent est mis sur l'adaptation à ses conséquences, la question des migrations est abordée de manière plus proactive, avec des politiques visant à attirer une main-d'œuvre qualifiée, à améliorer l'employabilité et à favoriser un marché du travail inclusif.

Toutefois, pour atténuer les risques de disparités régionales aggravées par la transition démographique, des politiques ciblées sont nécessaires pour soutenir les régions moins développées, s'attaquer aux causes profondes de la dépopulation et promouvoir un développement régional plus équilibré. Cela peut contribuer à une distribution plus équitable des opportunités et des ressources dans l'UE et réduire les impacts économiques et sociaux des changements démographiques.

Transition vers une économie neutre en carbone

La transition vers une économie neutre en carbone présente des risques pour les régions, en particulier celles fortement dépendantes de l'extraction des combustibles fossiles pour leurs revenus et leurs emplois. Ces régions peuvent nécessiter un soutien et du temps considérables pour restructurer leur économie et se diversifier vers d'autres secteurs. Par exemple, les régions fortement dépendantes du charbon ou du lignite peuvent faire face à des défis majeurs dans leur transition vers une économie à faibles émissions de carbone et ainsi nécessiter un soutien ciblé pour développer de nouvelles industries et créer de nouvelles opportunités d'emploi.

Cependant, cette transition offre également des opportunités aux régions ayant un potentiel de production d'énergie renouvelable, notamment celles disposant

d'importantes ressources éoliennes ou solaires. Ces régions peuvent avoir des opportunités pour développer de nouvelles industries et créer de nouveaux emplois, mais elles peuvent également rencontrer des difficultés à mettre en place les infrastructures et les compétences nécessaires pour soutenir ces nouvelles industries.

En pratique, le financement de la transition verte reste incertain, et les plans nationaux et régionaux manquent souvent de stratégies claires et ciblées pour relever ce défi. De plus, la transition verte nécessite un consensus sociétal large, qui ne peut être atteint que si la répartition des coûts et des bénéfices est juste et équitable.

Recommandations prospectives pour faire face aux risques des trois transitions

Dans ce contexte de risques accrus pour le développement des régions, l'étude propose plusieurs recommandations et pistes pour faire face à ces défis issus de transitions multiples et « méga-tendances ».

Les risques et les schémas de risques pour les régions exposées aux trois défis de la mondialisation et du changement technologique, de la transition démographique et de la transition climatique varient en fonction de la région et de sa catégorie. L'étude suggère qu'une approche individualisée du développement régional est nécessaire à l'avenir, en tenant compte des caractéristiques et des besoins uniques de chaque région, et que les décideurs politiques doivent être conscients des risques et des défis potentiels associés à ces transitions afin d'élaborer des politiques efficaces pour soutenir le développement régional et réduire les disparités régionales.

- Adopter des approches dynamiques pour le développement régional : L'étude montre que les impacts des défis ne correspondent pas exactement aux indicateurs traditionnels tels que le PIB par habitant ou les catégories régionales existantes. Cela suggère qu'une approche plus nuancée et dynamique du développement régional est nécessaire, une approche qui prend en compte les défis et les opportunités uniques auxquels sont confrontées les différentes régions. Pour relever efficacement ces divers défis territoriaux, l'UE pourrait devoir adapter son système actuel de catégories de régions dans le cadre de la politique de cohésion et rendre son financement plus ciblé. En adoptant une approche plus adaptative et réactive du développement régional, la politique de cohésion peut mieux aider les régions à relever les défis qui leur sont propres et à libérer tout leur potentiel.
- Réorienter la politique de cohésion pour lutter contre les disparités intra-régionales : La tendance croissante aux disparités intra-régionales nécessite une réévaluation fondamentale de l'objectif et du périmètre territorial de la politique de cohésion. L'approche axée sur le niveau

NUTS2 actuel pourrait ne plus suffire pour faire face aux complexités du développement régional, car elle masque souvent des inégalités importantes au sein des régions. Pour s'attaquer efficacement à ces disparités, la politique de cohésion doit adopter une approche plus nuancée et plus ciblée, en reconnaissant la diversité des besoins et des défis au sein des régions. Cela peut impliquer de déplacer l'accent de la politique vers les niveaux sous-régionaux ou locaux, permettant ainsi des interventions plus adaptées et une réduction plus efficace des disparités intrarégionales.

- Investir massivement dans la transition verte : La transition verte nécessite des investissements substantiels dans les énergies renouvelables, l'efficacité énergétique et les infrastructures durables, ce qui peut représenter une charge financière importante pour certaines régions, en particulier celles qui dépendent fortement des combustibles fossiles. Bien que la politique de cohésion ne puisse pas couvrir tous les besoins de financement liés à la transition écologique, elle peut jouer un rôle crucial en soutenant les États membres et les régions pour surmonter ces défis et garantir une transition équitable. Grâce à des investissements ciblés, la politique de cohésion peut permettre aux régions moins développées de mettre en place les infrastructures de production d'énergie nécessaires et de créer de nouvelles opportunités économiques basées sur les sources d'énergie renouvelables. En outre, la politique de cohésion peut soutenir le développement et le renouvellement des compétences nécessaires à une économie à faibles émissions de carbone, en donnant aux entreprises et aux travailleurs les moyens de s'adapter à l'évolution du marché de l'emploi et de prospérer dans une économie durable.

- Construire un large consensus sociétal sur l'urgence de l'action climatique : La réalisation d'un avenir sans émissions nettes d'ici à 2050 exige un large consensus sociétal sur l'urgence de l'action climatique. La politique de cohésion peut contribuer à l'établissement de ce consensus en favorisant une répartition juste et équitable des coûts et des avantages de la transition. En apportant un soutien à ceux qui sont le plus touchés, la politique de cohésion peut apaiser les inquiétudes, remédier aux impacts sociaux et économiques potentiels et faciliter une transition en douceur. En fin de compte, ce soutien est essentiel pour persuader les individus, les entreprises et les communautés d'adopter les changements de comportement nécessaires et d'accepter les implications d'un avenir à faibles émissions de carbone. En favorisant un sentiment de responsabilité partagée et de bénéfice collectif, la politique de cohésion peut contribuer à créer un élan sociétal qui stimule la transition vers un avenir plus durable et plus résilient au changement climatique.

- Un financement accru pour un soutien efficace : Pour relever le triple défi de la transition écologique, de la mondialisation et des changements technologiques et démographiques, il faudrait accroître considérablement

le financement de la politique de cohésion, en particulier dans le contexte d'une intégration économique plus poussée au sein de l'UE. Cela permettrait d'investir dans des infrastructures durables, de stimuler l'innovation et de développer les qualifications et les compétences requises dans un monde en mutation rapide. Toutefois, face aux contraintes budgétaires et aux défis émergents, la politique de cohésion doit également adapter et hiérarchiser ses efforts afin de maximiser son impact là où il est le plus nécessaire.

- La cohésion en tant qu'objectif commun de l'UE : La réduction des disparités régionales dans l'UE nécessite un effort concerté qui va au-delà de la seule politique de cohésion. Les politiques sectorielles, tant au niveau européen que national, doivent être conçues dans une optique territoriale, en tenant compte de leur impact territorial potentiel et en veillant à ce qu'elles complètent les objectifs de la politique de cohésion. En adoptant une perspective territoriale, les politiques de l'UE peuvent être plus efficaces pour relever les défis régionaux et promouvoir une croissance inclusive.
- Une approche stratégique et coordonnée du développement : Pour parvenir à une approche globale du développement régional, la politique de cohésion doit être étroitement alignée sur les politiques de développement nationales et infranationales. Il s'agit notamment d'aligner la politique de cohésion sur les stratégies à long terme visant à réduire les émissions de carbone, à promouvoir la numérisation et à faire face aux changements démographiques. D'autre part, le succès d'une telle approche stratégique nécessite une cohérence politique accrue, combinant et coordonnant les politiques sectorielles et territoriales, afin de soutenir le développement de toutes les régions, quelle que soit leur prospérité économique. En adoptant une telle approche, les décideurs politiques peuvent contribuer à combler le fossé entre les régions les plus développées et les moins développées, favorisant ainsi une croissance plus inclusive et durable.
- Renforcer les capacités pour répondre aux défis et opportunités émergents : L'étude souligne les inquiétudes concernant la capacité des autorités régionales à faire face aux défis émergents, notamment dans les plus petites structures. La politique de cohésion peut contribuer à renforcer ces capacités en développant des compétences et expertises adaptées à la transition verte, à la numérisation et aux changements démographiques, ainsi qu'en adoptant une approche plus souple et plus adaptable qui favorise l'innovation et fournit les ressources nécessaires.
- Pour libérer le potentiel des régions, il faut également reconnaître la nature à long terme de ce processus et le calendrier correspondant pour le soutien politique. Les transformations économiques fondamentales dans les régions peuvent prendre des décennies et, par conséquent, une approche soutenue et à long terme du développement et de la croissance

est nécessaire. À cet égard, la politique de cohésion de l'UE est bien placée pour fournir le cadre politique et le financement à long terme nécessaires, avec ses périodes de programmation de sept ans et la possibilité d'étendre les projets sur plusieurs périodes.

Zusammenfassung

Einleitung

Die Studie untersucht die zukünftige Landschaft der Kohäsionspolitik der EU vor dem Hintergrund von drei wesentlichen Herausforderungen: Globalisierung und technologischer Wandel, sich verändernde demografische Trends und der Übergang zu einer klimaneutralen Wirtschaft. Um die Auswirkungen dieser Herausforderungen auf verschiedene Regionen der EU zu bewerten, führt die Studie eine Analyse der regionalen Verwundbarkeit durch und verwendet vier makroökonomische Modelle sowie ein globales Wirtschaftsmodell zur Vorhersage der Entwicklungen in der Weltwirtschaft. Darüber hinaus wird die Analyse durch detaillierte Fallstudien ergänzt, die die Wahrnehmungen und Reaktionen vor Ort auf diese drei Herausforderungen in bestimmten Mitgliedstaaten und Regionen untersuchen und so ein differenziertes Verständnis der bestehenden Komplexitäten ermöglichen.

Analysebereiche

Regionale Verwundbarkeit gegenüber Herausforderungen

Die Verwundbarkeit der Regionen gegenüber den drei Herausforderungen wird anhand eines zusammengesetzten Index statistischer Indikatoren bewertet, die die Exposition, Sensitivität und Anpassungsfähigkeit der Regionen erfassen und eine starke Korrelation mit den regionalen Entwicklungsniveaus, gemessen am BIP pro Kopf, aufzeigen. Die Analyse liefert zwei zentrale Ergebnisse: Erstens hebt sie die komplexe Wechselwirkung von Faktoren hervor, die zur Verwundbarkeit einer Region gegenüber diesen Herausforderungen beitragen; und zweitens erläutert sie die Beziehung zwischen diesen Faktoren und dem regionalen BIP pro Kopf. Insbesondere legt das zweite Ergebnis nahe, dass die Kohäsionspolitik der EU gut positioniert ist, um die Verwundbarkeit der Regionen gegenüber diesen Herausforderungen zu mindern und somit deren Widerstandsfähigkeit zu erhöhen.

Modellierung und projizierte langfristige Auswirkungen der Herausforderungen auf die Regionen

Der zweite Teil der Studie bewertet die zukünftigen Auswirkungen der drei Herausforderungen auf das regionale BIP pro Kopf in der gesamten EU. Konkret wurden vier regionalökonomische Modelle – EU-EMS, MASST-5, E3ME und GEM-E3 – verwendet, um Projektionen über ihre Wirkung auf die regionalen

Wirtschaften bis 2035 unter alternativen Szenarien zur zukünftigen Entwicklung der EU und der Weltwirtschaft zu erstellen.

Mit zunehmender Globalisierung und technologischem Wandel legen die Projektionen nahe, dass eine tiefere globale Integration – gekennzeichnet durch zunehmenden Welthandel und Investitionsströme – wahrscheinlich das Wirtschaftswachstum in der EU ankurbeln wird. Allerdings könnte dieses Wachstum mit einer stärkeren Konzentration wirtschaftlicher Aktivitäten in Kernregionen einhergehen und daher regionale Disparitäten in der EU verschärfen. Die Auswirkungen einer zunehmenden globalen Integration auf einzelne Regionen hängen von ihrer Wettbewerbsfähigkeit, ihrem Innovationspotenzial und ihrer Anbindung an globale Wertschöpfungsketten ab.

Im Gegensatz dazu könnte ein Szenario zunehmender globaler Fragmentierung, das durch eine Verlangsamung des Welthandels gekennzeichnet ist, zur Rückverlagerung zuvor ausgelagerter Aktivitäten in die EU führen und möglicherweise weniger entwickelte Regionen begünstigen. Zudem könnte ein Rückgang des globalen Handels und der Investitionsströme einen unverhältnismäßig negativen Einfluss auf stärker entwickelte und sich im Übergang befindliche Regionen in der EU haben, im Vergleich zu weniger entwickelten Regionen. Dies könnte wiederum zu einer Verringerung regionaler Disparitäten beitragen – nicht aufgrund eines beschleunigten Wachstums in weniger entwickelten Regionen, sondern eher aufgrund eines insgesamt schleppenden Wachstums in der EU, wobei viele stärker entwickelte Regionen niedrigere Wachstumsraten verzeichnen würden.

In allen Szenarien bergen Globalisierung und technologischer Wandel das Risiko, regionale Disparitäten innerhalb der EU zu verschärfen, da wirtschaftlich stärkere Regionen besser in der Lage sind, neue Technologien zu absorbieren und zu nutzen, wodurch Innovation und schnelleres Wachstum gefördert werden. Dies könnte die Kluft zwischen wirtschaftlich stärkeren und schwächeren Regionen weiter vergrößern.

Interessanterweise könnte eine tiefere Integration der EU auch zur Vergrößerung regionaler Disparitäten beitragen, wenn auch durch einen anderen Mechanismus. Da die Zusammenarbeit und gemeinsame Unternehmungen zunehmen, könnten sich Aktivitäten stärker auf die entwickelteren Regionen konzentrieren, wo höhere Produktivität und größere Wettbewerbsfähigkeit voraussichtlich weitere Investitionen und Talente anziehen werden. Dies könnte möglicherweise die Wettbewerbsfähigkeit der EU als Ganzes stärken, jedoch auf Kosten zunehmender regionaler Ungleichheiten.

Prognosen zur demografischen Herausforderung legen nahe, dass die Migration in stärker entwickelte Regionen das BIP pro Kopf zunächst dämpfen könnte, da sich zuerst die Arbeitsmärkte an den Zustrom neuer Bewohner anpassen und die Produktionskapazitäten erweitert werden müssen, um diese aufzunehmen. Im Gegensatz dazu könnten weniger entwickelte Regionen, die

Bevölkerungsabwanderung erleben, kurzfristig einen Anstieg des BIP pro Kopf verzeichnen, da die verbleibende Bevölkerung von einem günstigeren demografischen Verhältnis profitiert. Allerdings dürfte sich dieser Trend langfristig umkehren, da die Abwanderung junger und hochqualifizierter Personen die produktive Kapazität der Region untergräbt und letztlich zu einem Rückgang des BIP pro Kopf führt. Insgesamt wird eine verstärkte Bevölkerungsmobilität zwischen den Regionen wahrscheinlich die regionalen Disparitäten verschärfen, da entwickeltere Regionen weiterhin Talente und Investitionen anziehen, während weniger entwickelte Regionen mit Entvölkerung und einem schwindenden Arbeitskräfteangebot zu kämpfen haben.

Die voraussichtlichen Auswirkungen des Übergangs zu einer klimaneutralen Wirtschaft auf regionale Disparitäten in der EU hängen von mehreren Schlüsselfaktoren ab, darunter die Finanzierungsmechanismen für die notwendigen Investitionen, das Tempo der Reduktion von Treibhausgasemissionen und die geografische Lage der Entwicklung erneuerbarer Energien. Einerseits bietet der grüne Wandel eine Chance für weniger entwickelte Regionen, insbesondere in Südeuropa, ihre relativ geringe Energieabhängigkeit und ihr erhebliches Potenzial für die Erzeugung erneuerbarer Energien zu nutzen, was möglicherweise wirtschaftliches Wachstum und Konvergenz fördern könnte. Andererseits könnten entwickeltere Regionen über die erforderlichen Ressourcen, Fachkenntnisse und Infrastrukturen verfügen, um sich schneller an die Herausforderungen des Wandels anzupassen und eine führende Rolle in aufkommenden, mit dem Übergang verbundenen Branchen und Dienstleistungen zu übernehmen. Die Nettoauswirkung auf regionale Disparitäten wird letztlich vom Zusammenspiel dieser konkurrierenden Dynamiken abhängen, was die Notwendigkeit gezielter politischer Maßnahmen unterstreicht, um sicherzustellen, dass der Übergang allen Regionen zugutekommt und potenzielle Ungleichheiten minimiert werden.

Analyse von Fallstudien in ausgewählten Mitgliedstaaten und Regionen

Um die modellbasierte Analyse zu ergänzen, wurde eine umfassende Reihe von Fallstudien in 41 Regionen in 13 EU-Mitgliedstaaten von nationalen Experten anhand eines standardisierten Rahmens durchgeführt. Diese Untersuchung analysierte, wie regionale Behörden und Interessengruppen die drei Herausforderungen wahrnehmen und welche Maßnahmen ergriffen oder geplant werden, um ihnen zu begegnen.

Die wichtigsten mit Globalisierung und technologischem Wandel verbundenen Risiken, die von Befragten und Teilnehmern an Fokusgruppen identifiziert wurden, umfassen:

- Risiken globaler Wertschöpfungsketten, die sich aus drei Hauptfaktoren ergeben: (1) eine hohe Abhängigkeit von globalen Wertschöpfungsketten in stark globalisierten Mitgliedstaaten, was sie anfälliger für externe

Schocks macht; (2) begrenzte inländische Wachstumschancen in Volkswirtschaften, die stark von ausländischen Direktinvestitionen abhängig sind, was zu einem Mangel an wirtschaftlicher Diversifizierung führen kann; und (3) eine Spezialisierung auf Produkte und Dienstleistungen mit niedriger bis mittlerer Wertschöpfung in weniger exportorientierten Mitgliedstaaten, was ihr wirtschaftliches Aufwertungspotenzial begrenzen kann.

- Produktivitätsrisiken, da einige Mitgliedstaaten im Vergleich zu anderen EU-Ländern und internationalen Wettbewerbern eine niedrige Produktivität oder ein geringes Wachstum aufweisen.
- Risiken der technologischen Wettbewerbsfähigkeit, aufgrund von Schwierigkeiten, mit technologischen Fortschritten in kritischen Sektoren Schritt zu halten, begrenzter Forschungs- und Innovationskapazitäten sowie niedriger EU-Finanzierung für Forschung und Entwicklung (F&E) in weniger wohlhabenden Mitgliedstaaten.
- Beschränkungen des Arbeitsmarktes, bedingt durch Arbeitskräftemangel und einen Mangel an hochqualifizierten Arbeitskräften.
- Anhaltende interregionale Disparitäten, die durch eine Polarisierung zwischen Hauptstadtregionen oder Wirtschaftszentren und anderen Gebieten verstärkt werden.

Als Reaktion auf diese Herausforderungen setzen die EU-Regionen ähnliche Maßnahmen um, wenn auch mit unterschiedlichen Prioritäten. Diese Initiativen umfassen erhöhte Investitionen in Forschung und technologische Entwicklung , Bemühungen zur Förderung engerer Verbindungen zwischen Forschungszentren und Unternehmen, Maßnahmen zur Stärkung der Wettbewerbsfähigkeit kleiner und mittlerer Unternehmen, Strategien zur Nutzung des grünen Wandels, der Digitalisierung und zur Verringerung von Qualifikationsungleichgewichten.

Diese Maßnahmen sind oft in nationale und regionale Pläne zur Verbesserung der Wettbewerbsfähigkeit integriert, wie beispielsweise die Strategien der intelligenten Spezialisierung (Smart Specialisation Strategies), die darauf abzielen, Aktivitäten mit potenziellen komparativen Vorteilen zu entwickeln. Allerdings zeigen die Fallstudien, dass trotz der weit verbreiteten Anerkennung der Herausforderungen und der Notwendigkeit einer Reaktion die ergriffenen oder geplanten Maßnahmen häufig fragmentiert sind und eine klare zugrundeliegende Logik fehlt. Dies erschwert es, nachzuvollziehen, wie die verschiedenen Strategieelemente zusammenpassen, um eine kohärente Antwort auf die Herausforderungen zu liefern.

Demografischer Wandel

Die demografische Herausforderung ist weithin anerkannt, mit einem gemeinsamen Verständnis der Auswirkungen niedriger Geburtenraten, einer steigenden Lebenserwartung und eines Rückgangs der erwerbsfähigen Bevölkerung. Es gibt weit verbreitete Bedenken hinsichtlich der Tragfähigkeit der Rentensysteme, des Zugangs zu Gesundheits- und Pflegediensten für eine alternde Bevölkerung sowie eines potenziellen Arbeitskräftemangels. Zudem bestehen Befürchtungen hinsichtlich der Integration von Migranten als potenzielle Lösung für diese Herausforderungen sowie zu den Herausforderungen, die durch Bevölkerungsbewegungen innerhalb der EU entstehen, etwa die Entvölkerung ländlicher Gebiete und die Abwanderung von Fachkräften aus Regionen mit begrenzten Beschäftigungsmöglichkeiten, unzureichender Infrastruktur und eingeschränkten öffentlichen Dienstleistungen.

Als Reaktion auf diese demografischen Veränderungen akzeptieren nationale und regionale Pläne den demografischen Wandel weitgehend als gegeben und konzentrieren sich auf die Umsetzung von Anpassungsmaßnahmen. Diese Maßnahmen umfassen die Digitalisierung von Gesundheits- und Sozialdiensten, die Förderung von Fernversorgungsdiensten sowie die Förderung des aktiven Alterns durch eine erhöhte Teilnahme am Arbeitsmarkt. Darüber hinaus werden Anstrengungen unternommen, um die Vereinbarkeit von Beruf und Privatleben für Frauen zu verbessern und ihre Beteiligung am Arbeitsmarkt zu fördern. Im Gegensatz dazu werden Fragen der Migration und Bevölkerungsbewegungen proaktiver angegangen, mit politischen Maßnahmen zur Anziehung und Bindung qualifizierter Arbeitskräfte, zur Verbesserung der Beschäftigungsfähigkeit und Produktivität sowohl einheimischer als auch migrantischer Arbeitnehmer sowie zur Förderung eines inklusiven und integrierten Arbeitsmarktes.

Übergang zu einer klimaneutralen Wirtschaft

Der Übergang zu einer klimaneutralen Wirtschaft hat tiefgreifende regionale Auswirkungen, die stark von Faktoren wie Klima, Landnutzung, Infrastruktur, der Wirtschaftsstruktur und bestehenden Energieversorgungsmustern abhängen. Die Fallstudien zeigen mehrere zentrale Herausforderungen auf, darunter die Abhängigkeit von energieintensiven Industrien, die Komplexität des Ausstiegs aus Kohle und Braunkohle, die Umstellung auf saubere Verkehrssysteme, die Verbesserung der Energieeffizienz von Gebäuden und die Einführung grüner Technologien.

Es wird allgemein anerkannt, dass Regionen, die stark von der Förderung fossiler Brennstoffe für Einkommen und Beschäftigung abhängen – etwa in Polen, Griechenland, Slowenien und Deutschland –, erhebliche Unterstützung und Zeit für die wirtschaftliche Umstrukturierung und Diversifizierung benötigen. Dennoch erhalten die breiteren Herausforderungen, mit denen andere Regionen

konfrontiert sind, in nationalen und regionalen Plänen oft nicht genügend Aufmerksamkeit.

Grundsätzlich haben sich alle EU-Mitgliedstaaten mit Ausnahme Polens dazu verpflichtet, bis 2050 Klimaneutralität zu erreichen, mit verschiedenen Maßnahmen wie Änderungen der Landnutzung zur Schaffung von CO_2-Senken (z.B. Finnland), der Sanierung von Gebäuden zur Verbesserung der Energieeffizienz (z.B. Rumänien), der Einführung gesetzlicher Vorschriften und Anreize zur Reduzierung des Verbrauchs fossiler Brennstoffe (z. B. Slowenien) und der Forderung nach regionalen Aktionsplänen (z. B. Portugal). Forschung und Innovation spielen in vielen nationalen und regionalen Plänen eine zentrale Rolle, wobei nahezu alle EU-Strategien für intelligente Spezialisierung Maßnahmen zur Unterstützung des grünen Wandels enthalten.

Allerdings fehlen in vielen Plänen detaillierte Angaben darüber, wie die Klimaneutralität tatsächlich erreicht werden soll oder wie die beträchtlichen Kosten für diesen Übergang (z.B. 3.000 Milliarden Euro in Frankreich und 2.100 Milliarden Euro in Rumänien) finanziert werden sollen. Externe Ereignisse, wie der russische Angriffskrieg in der Ukraine oder der allgemeine Widerstand in der EU gegen Steuern und Abgaben zur Reduzierung von Treibhausgasemissionen, könnten geplante Maßnahmen behindern oder gar zu politischen Kehrtwenden führen. Besonders auffällig ist das Fehlen spezifischer Strategien zur Veränderung des Verhaltens von Individuen und Unternehmen – ein entscheidender Aspekt, um bis 2050 Netto-Null-Emissionen zu erreichen.

Die Fallstudien zeigen mehrere gemeinsame Herausforderungen auf, die sich auf alle drei Übergänge beziehen:

- Die regionale Reaktion auf Herausforderungen wird stark vom nationalen Kontext und politischen Maßnahmen der Zentralregierungen beeinflusst, insbesondere in Bereichen wie Wirtschaft, Sozialschutz, Gesundheitswesen, Bildung und Migration. Dies verdeutlicht die Notwendigkeit koordinierter und abgestimmter Strategien auf nationaler und regionaler Ebene.
- Regionale und lokale Behörden stehen oft vor erheblichen Herausforderungen bei der Entwicklung und Umsetzung effektiver Maßnahmen, was ihre Fähigkeit zur Bewältigung dieser Herausforderungen einschränken kann.
- Der räumliche Fokus von Maßnahmen geht oft über regionale Grenzen hinaus und erfordert grenzüberschreitende Zusammenarbeit und Koordination. Gleichzeitig müssen einige Maßnahmen auf lokaler Ebene an spezifische Bedürfnisse angepasst werden – manchmal unterhalb der NUTS-2- oder NUTS-3-Ebene –, was flexible und maßgeschneiderte Lösungen erfordert.

- Die Komplexität von Finanzierungsquellen und Programmen kann zu ineffizienten Doppelstrukturen, Ineffizienzen und unangemessenen Reaktionen auf die Herausforderungen führen.

Letztendlich heben die Fallstudien hervor, dass weniger entwickelte Regionen gezielte Unterstützung benötigen, um nicht nur die negativen Auswirkungen dieser Herausforderungen abzumildern, sondern auch die Chancen zu nutzen, die sich aus diesen strukturellen Veränderungen ergeben, insbesondere im Bereich des grünen Wandels, wo diese Regionen das Potenzial haben, erneuerbare Energiequellen zu entwickeln.

Zentrale Erkenntnisse und zukunftsgerichtete Empfehlungen

Die Studie hebt verschiedene Risiken und Risikomuster für Regionen hervor, wenn sie den drei Herausforderungen der Globalisierung und des technologischen Wandels, des demografischen Übergangs und des Klimawandels ausgesetzt sind. Diese Risiken variieren je nach Region und ihrer spezifischen wirtschaftlichen und kohäsionspolitischen Kategorie.

Potenzielle zukünftige Risiken für eine ausgewogene regionale Entwicklung

Die Verwundbarkeit der Regionen gegenüber zukünftigen Herausforderungen variiert erheblich und hängt stark vom geografischen, wirtschaftlichen und sozialen Kontext einer Region ab. Gleichzeitig zeigt die enge Korrelation zwischen der Verwundbarkeit der Regionen und ihrem wirtschaftlichen Entwicklungsstand, dass die Kohäsionspolitik ein wirksames Instrument zur Stärkung der Resilienz ist.

Globalisierung und technologischer Wandel

Globalisierung und technologischer Wandel bergen das Risiko, künftige regionale Disparitäten innerhalb der EU zu verschärfen, da wirtschaftlich stärkere Regionen besser in der Lage sind, neue Technologien zu absorbieren und zu nutzen, wodurch Innovation und schnelleres Wachstum gefördert werden.

Weniger entwickelte Regionen hingegen können erhebliche Schwierigkeiten haben, auf Globalisierung und technologischen Wandel zu reagieren, insbesondere aufgrund eines begrenzten Zugangs zu Finanzmitteln, unzureichender Infrastruktur und eines Mangels an qualifizierten Arbeitskräften. Diese Regionen sind möglicherweise auch stärker von den Risiken globaler Wertschöpfungsketten betroffen, wie z. B. der Abhängigkeit von externen Märkten und Lieferanten, und könnten einen Rückgang der wirtschaftlichen Aktivität erleben, wenn der globale Handel abnimmt. Darüber hinaus stellt die Studie fest, dass Regionen mit einer geringen wirtschaftlichen Diversifizierung,

insbesondere solche, die stark von einer einzigen Industrie oder einem einzigen Sektor abhängig sind, stärker den Risiken der Globalisierung und des technologischen Wandels ausgesetzt sein könnten.

Demografischer Übergang

Der demografische Übergang stellt für die Regionen der EU erhebliche Herausforderungen dar, insbesondere für diejenigen mit einer alternden Bevölkerung und einer schrumpfenden Erwerbsbevölkerung, was langfristig die regionalen Disparitäten verstärkt. Regionen mit niedrigen Geburtenraten und begrenzter Migration könnten mit einem Bevölkerungsrückgang konfrontiert sein, was zu einem Rückgang der Erwerbsbevölkerung und der wirtschaftlichen Aktivität führt. Ländliche Gebiete und periphere Regionen sind besonders anfällig für Entvölkerung, da junge und hochqualifizierte Personen möglicherweise in städtische Gebiete abwandern, um bessere Beschäftigungsmöglichkeiten zu finden.

Im Gegensatz dazu könnten Regionen mit hohen Migrationsraten ein Bevölkerungswachstum verzeichnen, jedoch mit Herausforderungen bei der Integration neuer Einwohner sowie bei der Bereitstellung angemessener öffentlicher Dienstleistungen und sozialer Einrichtungen konfrontiert sein. Insgesamt könnten demografische Veränderungen die regionalen Disparitäten in Zukunft weiter verschärfen, da wirtschaftlich stärker entwickelte Regionen Talente und Investitionen anziehen und halten, während weniger entwickelte Regionen mit Entvölkerung und einer schrumpfenden Erwerbsbevölkerung zu kämpfen haben.

Übergang zu einer klimaneutralen Wirtschaft

Der Übergang zu einer klimaneutralen Wirtschaft birgt Risiken für Regionen, insbesondere für diejenigen, die stark von der Gewinnung fossiler Brennstoffe für Einkommen und Beschäftigung abhängig sind. Diese Regionen könnten erhebliche Unterstützung und Zeit benötigen, um ihre Wirtschaft umzustrukturieren und sich in andere Sektoren zu diversifizieren. Beispielsweise könnten Regionen, die stark von Kohle oder Braunkohle abhängig sind, erhebliche Schwierigkeiten beim Übergang zu einer kohlenstoffarmen Wirtschaft haben und gezielte Unterstützung benötigen, um neue Industrien zu entwickeln und neue Beschäftigungsmöglichkeiten zu schaffen.

Allerdings bietet dieser Übergang auch Chancen für Regionen mit Potenzial zur Erzeugung erneuerbarer Energien, insbesondere für solche mit umfangreichen Wind- oder Solarressourcen. Diese Regionen könnten neue Industrien entwickeln und Arbeitsplätze schaffen, aber gleichzeitig mit Herausforderungen bei der Entwicklung der erforderlichen Infrastruktur und der Qualifikation von Arbeitskräften für diese neuen Industrien konfrontiert sein.

In der Praxis bleibt die Finanzierung des grünen Wandels ungewiss, und nationale sowie regionale Pläne enthalten oft keine klaren, gezielten Strategien zur Bewältigung dieser Herausforderung. Darüber hinaus erfordert der grüne Wandel eine breite gesellschaftliche Zustimmung, die nur erreicht werden kann, wenn die Verteilung der Kosten und Vorteile fair und gerecht ist.

Zukunftsgerichtete Empfehlungen zur Bewältigung der Risiken der drei Übergänge

Angesichts des zunehmenden Risikos für die regionale Entwicklung schlägt die Studie mehrere Empfehlungen und Maßnahmen vor, um diesen Herausforderungen zu begegnen:

Dynamische Ansätze für die regionale Entwicklung: Die Ergebnisse der Studie zeigen, dass die Auswirkungen der Herausforderungen nicht eindeutig mit traditionellen Indikatoren wie dem BIP pro Kopf oder bestehenden regionalen Kategorisierungen übereinstimmen. Dies legt nahe, dass ein differenzierter und dynamischerer Ansatz für die regionale Entwicklung erforderlich ist.

Neuausrichtung der Kohäsionspolitik zur Bekämpfung innerregionaler Disparitäten:

- Der zunehmende Trend zu innerregionalen Disparitäten erfordert eine grundlegende Neubewertung des Fokus und der territorialen Reichweite der Kohäsionspolitik. Die derzeitige NUTS-2-Ebene ist möglicherweise nicht mehr ausreichend, um die komplexen Herausforderungen der regionalen Entwicklung anzugehen, da sie oft erhebliche innerregionale Unterschiede verschleiert.
- Massive Investitionen in den grünen Wandel: Der grüne Wandel erfordert erhebliche Investitionen in erneuerbare Energien, Energieeffizienz und nachhaltige Infrastruktur. Obwohl die Kohäsionspolitik nicht alle Finanzierungsanforderungen des grünen Wandels allein decken kann, kann sie eine entscheidende Rolle dabei spielen, Mitgliedstaaten und Regionen bei der Bewältigung dieser Herausforderungen zu unterstützen und einen gerechten Übergang sicherzustellen.
- Stärkung der Kapazitäten regionaler Behörden: Die Studie weist auf Bedenken hinsichtlich der Fähigkeit regionaler Behörden hin, auf aufkommende Herausforderungen zu reagieren, insbesondere in kleineren Strukturen. Die Kohäsionspolitik kann dazu beitragen, diese Kapazitäten zu stärken, indem sie Fähigkeiten und Fachwissen zur Bewältigung des grünen Wandels, der Digitalisierung und des demografischen Wandels entwickelt.
- Sicherstellung einer ausreichenden Finanzierung für eine wirksame Unterstützung: Die Bewältigung der Herausforderungen des grünen

Wandels, der Globalisierung und des demografischen Wandels erfordert eine erhebliche Aufstockung der Kohäsionspolitik-Finanzierung.

- Verbesserung der politischen Koordinierung auf allen Ebenen: Die Verringerung regionaler Disparitäten kann nicht allein durch die Kohäsionspolitik erreicht werden. Sektorale Politiken auf europäischer und nationaler Ebene müssen eine räumliche Perspektive integrieren und die Ziele der Kohäsionspolitik ergänzen.

Durch die Umsetzung dieser Empfehlungen kann die Kohäsionspolitik besser auf die Herausforderungen der Globalisierung, des demografischen Wandels und des Klimawandels reagieren und so zu einer ausgewogeneren und widerstandsfähigeren regionalen Entwicklung beitragen.

1. Introduction

This report examines the current operation and future context of EU cohesion policies in the light of three sets of challenges facing Member States and regions – those emanating from globalisation and technological change, demographic trends, and the need to achieve a green transition to a climate-neutral and resilient economy.([1])

1.1. The three challenges and their regional impact

Globalisation and technological change are important drivers of aggregate growth in the EU, yet the economic benefits arising from them are unevenly distributed across EU regions. Specifically, globalisation has primarily benefited metropolitan regions, which are hubs of finance, technology, and services. On the converse, rural and peripheral regions that rely on traditional industries such as agriculture and basic manufacturing have been left behind. These differences are mirrored in levels of income and employment opportunities. Some regions have gained hugely from growth of trade and industrial markets, both worldwide and within the EU, while other regions were hit hard by the relocation of manufacturing jobs, and subsequent closures of factories and industrial facilities. Many of the more rural regions have lost population and face difficulty in attracting and retaining new businesses, skilled workers and investment. Depressed regions and less developed regions often lack the resources and institutional capacity to implement new specialisations in green technology, tourism, or specialised manufacturing sectors.

Technological change, driven by rapid advances in digital technologies, automation and robotics, is reshaping economies and societies worldwide. Although these advances present both opportunities and challenges, the uneven pace of the adoption of new technologies, combined with skill mismatches and infrastructure disparities, tends to widen existing regional inequalities with regions in north-western Europe generally outperforming those in southern and eastern Europe. Investment in R&D, access to venture capital, and collaboration between businesses, universities and research centres all influence the ability of companies to bring innovations to market. The lack of innovation ecosystems is particularly challenging for regions that depend on declining industries and need to develop new areas of economic activity.

([1]) The report summarises results of a study commissioned by DG Regio and implemented by a consortium led by the Vienna Institute for International Economic Studies (wiiw). Partners included the University Politecnico di Milano (Polimi), Cambridge Econometrics (CE), Ismeri Europa (Ismeri), E3-Modelling (E3M), Applica sprl, and the Netherlands Environmental Assessment Agency (PBL).

Demographic change characterised by ageing populations, declining birth rates and population movements both within the EU and from outside impacts economic growth, labour markets, social services, and regional development. Increases in the proportion of older people are particularly pronounced in rural and peripheral areas where young people, especially the more educated, move to urban centres, especially in more developed regions, for further education and to take up employment. At the same time, regions with large inflows of population experience problems with regard to housing and essential services which can contribute to social tensions.

The transition towards a **climate-neutral economy**, driven by the European Green Deal and the commitment to achieve net zero greenhouse gas (GHG) emissions by 2050, requires major changes in energy supply and use, agriculture, industry, transport systems and buildings.([2]) The transition offers long-term benefits, such as cleaner air and green jobs, but the costs of investment and inaction, especially in the light of increasingly negative impacts of climate change ([3]), are substantial and there are major economic and social challenges, particularly for regions which are still reliant on carbon-intensive industries.

The green transition once again highlights the challenge of unequal access to resources and investment. Wealthier regions with advanced technology sectors and strong innovation ecosystems are better placed to attract green investments, while less developed or peripheral regions struggle to find funding and expertise.

1.2. Outline of the study

An assessment of the vulnerability of regions across the EU to each of the three challenges, based on available statistical indicators ([4]), provides an initial foundation for the two major components of the study – a modelling exercise to project potential impacts region-by-region and case studies of current perceptions and policies in 13 of the 27 Member States.

([2]) In this study, the transition towards a climate-neutral economy does not cover the direct effects of climate change or related mitigation and adaption measures. The focus is on how regional economies have to transform to become climate-neutral and the effects of this transition on territorial cohesion. To complement this study, further analysis on the economic impacts of climate change has been conducted. The first results were published in the Ninth Cohesion Report.

([3]) For further information, detailed analyses and figures on the cost of inaction and negative impacts of climate change, see the European Climate Risk Assessment, the Commission's communication on managing climate risks, and the relevant chapters of the 2040 climate target impact assessment

([4]) The study and tables in this report use the NUTS-2 classification which identifies some 240 regions in the 27 Member States.

Vulnerability indexes reported in Chapter 2 are built on 140 indicators at the NUTS-2 level with sub-indexes to illustrate the exposure, sensitivity and adaptive capacity of regions with respect to each of the three challenges.([5]) The indexes present broadly-based measures of the extent to which the EU regions may be expected to benefit or lose from each of the challenges, providing a basis for the modelling exercise and case studies.([6])

The modelling exercise employs four different national-regional models ([7]) to project the effects of the challenges under four alternative scenarios that combine alternative assumptions for the EU and the rest of the world. Chapter 3 presents projections of the effects up to 2035 with paths deviating progressively from the current situation and with sufficient time for medium and longer-term effects to work through. The main objectives for building the four scenarios is to show (1) how the challenges may affect regions with different levels of development, as defined for the purposes of EU Cohesion Policy, and (2) how sensitive the projected outcomes of regional development are to the different assumptions about the future EU and global context.

Case studies for 13 Member States conducted in parallel with the modelling exercise investigate the capacity of regions to respond to the challenges by surveying perceptions of their impact at the national and regional level and identifying policies, strategies, and obstacles to effective action. The studies combine documentary evidence assembled by country experts with the findings from extensive interviews with national and regional officials. The results were validated by focus groups involving multiple local stakeholders. Chapter 4 presents the main findings of the case studies, with a summary of current experiences with EU regional policies and their relevance at the regional level.

The final chapter draws out policy implications, with an emphasis on issues that need consideration in the preparation of the post-2027 Cohesion Policy.

([5]) Statistical indicators were combined using a methodology similar to that applied for the EU Commission's Regional Competitiveness and Social Progress index.

([6]) Construction of the indexes was informed by a review of relevant publications regarding the three challenges with and 'benchmark' assessments of past and current trends related to the three challenges at the European and global level comparing developments in EU Member States with those in the US, China, Russia, Latin America and Japan. See the Methodological Report of the study for details.

([7]) MASST-5 (Polimi), EU-EMS (PBL), E3ME (CE) and GEM-E3 (E3).

2. The regions' vulnerability to the three challenges

The indicator of vulnerability used in this study is based on the concepts applied in the DG Regio 'Regional Challenges – Phase 2' study ([8]) and the Intergovernmental Panel on Climate Change (IPCC) Fourth and Fifth Assessment Reports ([9]) ([10]). Accordingly, a region's vulnerability is considered to be a function of its exposure, sensitivity, and adaptive capacity to each of the three challenges. Specifically:

Regional exposure is defined as the extent to which a regional economy is likely to be affected – negatively or positively – by a challenge. In other words, exposure measures how 'open' a regional economy is to a challenge.

Regional sensitivity is defined by the extent to which a regional economy reacts to a challenge in terms of changes in output and employment. Accordingly, the situation after the challenge hits is compared with the situation before.

Regional adaptive capacity is defined as the ability of a regional economy to adjust to a challenge. This indicates the potential of a region to mitigate the negative consequences of a challenge or to take advantage of it ([11]).

These concepts are operationalised through a vulnerability index for each challenge that, in methodological terms, is similar to the EU Regional Competitiveness Index ([12]) and the EU Social Progress Index ([13]). The index takes account of the detailed characteristics of regions. This includes their sectoral structure, skill endowment, innovative potential, population trends, accessibility, greenhouse gas emissions, and quality of governance. The characteristics are then combined to derive indexes for exposure, sensitivity, and adaptive capacity, which are then aggregated into a single number ranging from

([8]) https://ec.europa.eu/regional_policy/en/information/publications/studies/2011/regional-challenges-in-the-perspective-of-2020-phase-2-deepening-and-broadening-the-analysis.

([9]) IPCC, 2007: Climate Change 2007: Synthesis Report. Contribution of Working Groups I, II and III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, Pachauri, R.K and Reisinger, A. (eds.)]. IPCC, Geneva, Switzerland,

([10]) IPCC, 2014: Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)]. IPCC, Geneva, Switzerland

([11]) The characteristics that shape a region's adaptive capacity are independent of the challenge and consist of those general factors that can generate growth but do not affect a region's exposure or sensitivity towards a specific challenge.

([12]) Annoni, P., Kozovska, K., 2010, EU Regional Competitiveness Index RCI 2010, EUR 24346 EN. Luxembourg (Luxembourg): Publications Office of the European Union; 2010. JRC58169

([13]) Annoni, P, Bolsi, P., 2020, The Regional Dimension of Social Progress in Europe: Presenting the new EU Social Progress Index, DG Regio Working Paper 06/2020.

0 (lowest vulnerability) to 100 (highest vulnerability) for each region and challenge. ([14])

For the challenge of **globalisation and technological change**, a region's vulnerability relates to its competitiveness. Accordingly, the least vulnerable regions are highly innovative ones. These regions are typically endowed with a highly educated population and specialise in the production of technologically advanced and knowledge-intensive goods and services. Their firms tend to operate successfully in European and global markets. Typical examples of such regions include southern Germany, Ireland, the Benelux countries, Austria, and Sweden as well as Île-de-France, Midi-Pyrénées and Rhône-Alpes in France and País Vasco and Comunidad Foral de Navarra in Spain. The regions most vulnerable to globalisation and technological pressures are structurally weaker regions in Portugal, southern Spain, southern Italy, Greece, Bulgaria, Romania and the Eastern parts of Hungary, Poland, and Slovakia. These regions are endowed with less favourable sectoral structures, lower innovative capacity, and less skilled workforces. Accordingly, regional vulnerability to the globalisation and technological change challenge exhibits a core-periphery pattern, with the extent of a region's vulnerability being closely correlated with its level of economic development.

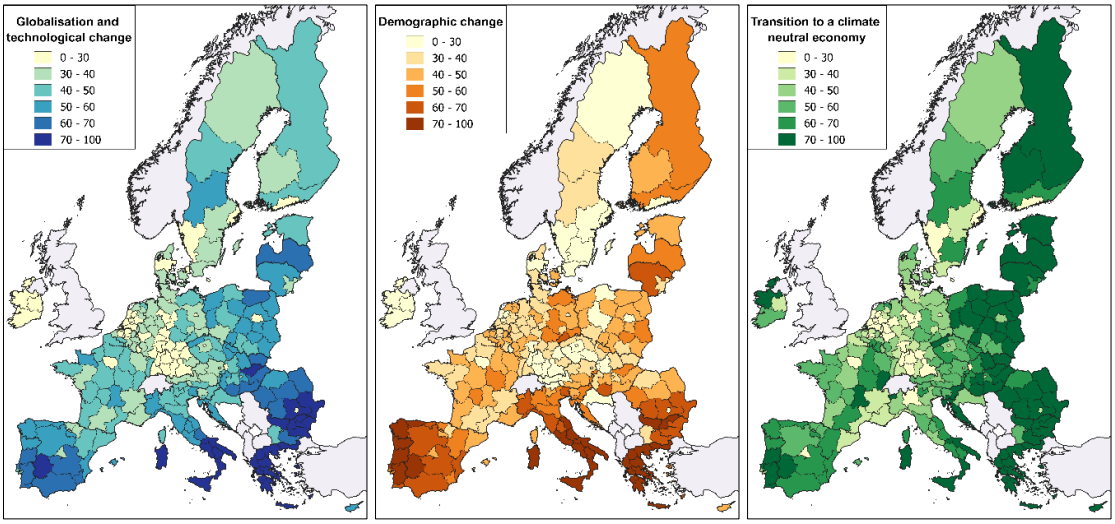
Vulnerability to **demographic change** is highest in the southern EU countries(Greece, Italy, Portugal and Spain). This is the result of a mix of unfavourable conditions and trends: low birth rates, an age structure skewed towards older people and thus high old-age dependency rates, as well as net outward migration. Vulnerability to demographic change is also high in central and eastern Europe, as the population in most of these regions tends to have a much lower life expectancy than other EU regions. Many of the regions are simultaneously experiencing a decrease in population through net outflows, especially the structurally weaker regions in Bulgaria, Poland, and Romania. Nevertheless, in most central and eastern Europe regions birth rates are higher than in most other parts of the EU, and old-age-dependency rates are comparatively low, reducing their vulnerability to demographic change to some extent. In addition, in many EU countries, including many of the more developed like Austria, Belgium, France, Germany or the Netherlands, there are significant variations between regions in vulnerability to demographic change.

The vulnerability of regions to the **transition to a climate neutral economy** has a distinct spatial pattern. Regions with low vulnerability are typically located in the centre, regions with a medium degree are located predominantly in the west, and those with the highest vulnerability are mostly located in the east of the EU. Many of the high vulnerability regions are among the most emission-intensive regions in the EU, meaning that their industrial production generates a disproportionate

([14]) A full description of the index and the data used to estimate it are provided in the Interim Report and the Methodological Report of the study.

amount of greenhouse gas emissions. While vulnerability tends to be lower in the central and western regions, a few regions have relatively high vulnerability, mostly because of the structure of their economies and specialisation in carbon-intensive industries ([15]), especially coal-mining and steel production, or in industries that are likely to undergo a significant structural change because of the introduction of green technologies. Examples include Midi-Pyrénées and Franche-Comté in France, Região Centro in Portugal and Groningen in the Netherlands.

Figure 1 - Regional vulnerability indicators for the three challenges, from 0 (lowest vulnerability) to 100 (highest vulnerability)



Source: Service provider, 2025

The close correlation between the regions' vulnerability to the three challenges and their level of economic development shows an immediate link to EU Cohesion Policy. Combining the vulnerability with the Cohesion Policy grouping of regions (Table 1) shows that the vast majority of the more developed regions have low or medium vulnerability to the three challenges, while the transition regions are mostly medium or highly vulnerable. Most less developed regions are also among the most vulnerable in the EU.

Main takeaways

- The regional pattern of vulnerability is closely aligned with the GDP per head of regions. In terms of both vulnerability and socioeconomic development, there is a strong core-periphery pattern in the EU, similar to the EU Cohesion Policy groups.

([15]) According to the data this is also the case for many Finnish regions that tend to have a comparatively large share in more energy-intensive industries, while overall, their manufacturing sector is, compared to other regions, quite emission-intensive.

- Vulnerability is a multidimensional phenomenon, not only because many regions (especially less developed) are threatened by multiple challenges simultaneously, but also because their vulnerability is caused by a multidimensional set of factors that determine a region's capacity to tackle and resist these challenges. These factors include the region's sectoral structure, skills endowment, and innovation capacity as well as social and political factors, like social fabric, employment, and governance.

Table 1 - The vulnerability of EU regions by Cohesion Policy groups, numbers of NUTS-2 regions by group

Cohesion Policy group	Vulnerability	Challenge		
		Globalisation	*Demographic*	*Green*
More developed	Low	69	56	65
	Medium	23	27	27
	High	3	12	3
	Total	**95**	**95**	**95**
Transition	Low	8	11	12
	Medium	42	31	37
	High	16	24	17
	Total	**66**	**66**	**66**
Less developed	Low	0	10	0
	Medium	12	19	13
	High	58	41	57
	Total	**70**	**70**	**70**

Source: Service provider, 2025

3. Modelling the impact of challenges on eu regional disparities

This chapter summarises results of scenarios estimated by four national-regional macroeconomic models used to project the potential economic impact of the three challenges on NUTS-2 regions ([16]) across the EU over the period up to 2035 under four different assumptions about EU internal and external developments. ([17]) The modelling exercise paints a picture of the variability of impacts and the extent to which the challenges separately or in combination may be expected to narrow or widen regional disparities in GDP per head. In no way should the model results be considered forecasts of the effects on economic growth to be expected under the various scenarios. Rather, the purpose of using the models is to identify the issues that are relevant for economic cohesion – i.e. the balanced development of regions across the EU – that could arise as a result of the challenges and to help identify the specific effects on particular regions or groups of regions. The models should therefore be seen as an aid to thinking about the effects of the challenges on regional development and how the EU and global contexts affect how these multiple challenges impact different regions.

This section provides an overview of concepts and definitions used in the modelling exercise and the presentation of results below.

Baseline

The scenarios for the three challenges are built on top of a baseline projection for the EU as a whole, known as the "EU 2020 reference scenario" ([18]) that was made in 2021 and extends to 2050. With GDP growth averaging 1.2% per year from 2026 onwards and little or no change in total population, the reference scenario embodies prospective changes in patterns of energy supply and use but does not incorporate assumptions about the impact of current or future conflicts such as Russia's war of aggression against Ukraine.

([16]) The model scenarios exclude nine overseas territories that are classified as EU regions in the NUTS2 nomenclature (five for France and two each for Portugal and Spain).

([17]) EMS (PBL Netherlands), MASST-5 (Polimi, Italy), E3ME (CE, UK), GEM-E3 (E3M, Greece). The two E3 models have a specific focus on energy and have previously helped to construct f the EU 2020 reference scenario. Detailed descriptions of the models are included in the Interim Report and the Methodological Report of the study.

([18]) The EU Reference Scenario 2020 projects the "impact of macro-economic, fuel price and technology trends and policies on the evolution of the EU energy system, on transport, and on their greenhouse gas (GHG) emissions" (European Commission, Directorate-General for Climate Action et al., 2021).

The scenario assumptions

The effects of the three challenges on cohesion are examined for four different scenarios, built on the basis of alternative assumptions about the future EU and global economic context. For the EU, two alternative development paths are assumed, termed “cooperation” and “competition”, while for the global economy, the assumed development paths are termed “integration” and “fragmentation”.

EU cooperation envisages an EU that secures cooperation between Member States to establish common policies with respect to energy, security, migration, digitalisation, the environment and climate change.

EU competition represents a reduction in common action and countries adopting independent policies, leading to less cross-border cooperation and more unilateral behaviour to tackle the challenges.

Global integration is interpreted as the existence of institutional cooperation among “superpowers”, leading to common policies towards environmental and social challenges, growing global markets, with ready access to raw materials, but with fiercer competition in international trade.

Global fragmentation assumes increasing rivalry between the superpowers leading to strategic reshoring and mutual restrictions on global trade and individualistic attitudes to technology and environmental problem-solving.

These sets of assumptions form the basis for the four scenarios used in the modelling analysis, which are defined as follows:

- Scenario 1: EU cooperation plus global cooperation
- Scenario 2: EU cooperation plus global fragmentation
- Scenario 3: EU competition plus global cooperation
- Scenario 4: EU competition plus global fragmentation

The findings of the modelling exercise on the impact of the three challenges on EU regional disparities in GDP per head are summarised below. The results are presented by groups of regions, grouped together by geographic location and Cohesion Policy categories of regions (more developed, transition, and less developed regions as classified for the 2021-2027 programming period). For the geographic dimension, EU NUTS2 regions are split into three distinct groups:

- The EU south is defined as the NUTS-2 regions of Cyprus, Greece, Malta, Portugal and Spain, as well as the Southern regions in Italy.
- The EU east consists of the NUTS-2 regions of Bulgaria, Croatia, Czechia, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, and Slovenia.

- The EU north-west are the NUTS-2 regions of Austria, Belgium, Denmark, Finland, France, Germany, Ireland, the Northern regions of Italy, Luxembourg, the Netherlands, and Sweden.

Where appropriate, these groupings are combined with the regions' vulnerability for the respective challenge as indicated above to provide a more nuanced illustration of the effects of the challenges.

Model results

Throughout this chapter, the model results are shown as to focus on the effects of the challenges on regional disparities and EU cohesion. For this, the model projections for the regions' GDP per head in 2035, i.e. their growth rate difference to the baseline projections (in percent), are normalised with the EU average growth rate difference (in percent) to the baseline. The average effect for the regional groupings is then given as the median of the normalised growth rate difference of the regions within each group.

While the median results for regional groups may suggest a uniform trend, the projections within each group reveal significant variations. For instance, even if the median GDP per capita growth rate for a regional group appears above average, leading to a higher level by 2035, this outcome is not universal across all regions within the group. Instead, each group contains regions that benefit from a particular challenge under the respective scenarios, as well as those that experience negative consequences. This disparity highlights the importance of factors beyond initial GDP per capita in determining whether a region gains or loses from a given challenge.

3.1. Globalisation and technological change

Challenges associated with globalisation of production and finance as well as technological change include a wide range of potential future trends. For example, global cooperation in the development of technology, the organisation of production, and use of IT may increase. This is already evident in corporate and administrative networks that control international trade and investment.

To model the effects of globalisation and technological change, the EMS and MASST-5 models ([19]) assume that EU cooperation, inter alia, will bring increased investment in R&D, technological development, and knowledge transfers, and an increase in the digitalisation of the economy. By contrast, a competition scenario assumes that Member States prioritise their own strategies in response to globalisation and technology challenges. R&D and skills are assumed to increase, while technological transfers and the pace of digitalisation reduce. Industry 4.0 technology adoption mainly takes place in advanced regions and technologically advanced sectors within each country. Global integration implies further development of global value chains and shared technology, while fragmentation results in 'near-shoring' of value chains and more dispersed technological development.

MASST-5 emphasises the adoption of digital technologies in services and robotised production in manufacturing, which triggers positive effects in less developed regions that adopt these technologies, despite initially lagging behind. By contrast, in the EU-EMS model, digitalisation effects are more focussed on the medium-to-high-tech manufacturing sectors and knowledge intensive services, which are concentrated in the economically strong regions and countries. Accordingly, the positive effects of accelerated technological advance are geographically more evenly spread in the MASST-5 projections and more clustered in the more developed regions in the EU-EMS model.

EU-EMS puts a stronger emphasis on global trade effects. Consequently, the positive (negative) effects from global integration (fragmentation) in the model are stronger than in MASST-5. From this perspective, the models can be seen as complementary. EU-EMS focuses more on the globalisation aspect, while not ignoring technological change. MASST-5 focuses on the technological change aspect of the challenge, which is seen as a central part of globalisation.

Despite the differences in the models, their projections on the aggregate growth effects for the EU are similar. Both models agree that EU cooperation has stronger aggregate effects on GDP per head than EU competition and that global integration leads to higher aggregate growth than global fragmentation. Consequently, in both models, scenario 1 is the most expansionary, though the

([19]) A detailed description of the models and the modelling approach is provided in the Methodological and the Interim Report of the study.

effect on GDP per head in 2035 (relative to the baseline) is larger in MASST-5 than in EU-EMS. On the other hand, in EU-EMS the effects of a decline in global trade and investment activities have larger adverse effects on aggregate EU GDP per head than in MASST-5. In the former, global fragmentation scenarios are less expansionary than global integration ones. In MASST-5, which puts more weight on technology and knowledge transfers, EU cooperation scenarios are more expansionary at the aggregate level than the EU competition ones. In both models, scenario 4 (EU competition with global fragmentation) is the least expansionary one.

These aggregate effects are unevenly distributed across the EU regions, with corresponding effects on regional disparities. The effects are summarised in Table 2 for the EU-EMS model with the focus on globalisation and in Table 3 for the MASST-5 model with the focus on technological change. The regional groups are both geographical, dividing the EU regions into EU north-west, EU east and EU south, and by Cohesion Policy categories of regions. In some cases, regions are also divided by level of vulnerability to globalisation challenges, as identified in the previous chapter.

Focusing on the EU-EMS model, the projections indicate that global and EU cooperation will lead to increased disparities across EU regions. By 2035, GDP per capita is expected to be higher in more developed EU regions, particularly those with a strong presence of medium-to-high-tech industries or urban agglomerations that serve as hubs for knowledge-intensive services. Similarly, transition and less developed eastern EU regions that are less vulnerable to globalisation are also projected to experience higher-than-average GDP per capita growth. In contrast, transition and less developed regions in southern EU and those in eastern EU that are more vulnerable to globalisation are expected to trail behind the EU average, with lower GDP per capita levels. Under scenario 2, which combines EU cooperation with global fragmentation, the EU-EMS model projects some convergence of GDP per capita towards the EU average in certain regions. Specifically, this convergence is expected in the more developed regions of eastern EU, such as capital cities, as well as in southern EU regions and less vulnerable transition and less developed regions in eastern EU. The assumption of disrupted global trade flows in this scenario, combined with the strong trade linkages between these regions and the EU's economic core, creates opportunities for near shoring of activities previously located outside the EU. In contrast, the more vulnerable less developed regions in southern and eastern EU, which have weaker connections to European value chains, are less likely to benefit from the relocation of economic activities. Meanwhile, the north-western EU regions are projected to experience GDP per capita below the EU average by 2035, as they are strongly affected by the slowdown in global trade growth.

In scenario 3, with global cooperation but EU competition, Member States are assumed to adopt more nationally oriented investment and research strategies.

The result is a concentration of economic activities in the core areas within countries ([20]), with growing regional disparities.

In scenario 4, characterised by EU competition and global fragmentation, the EU-EMS model projects that north-western EU regions will experience slower growth compared to other EU regions. This is due to the combined effects of depressed global trade and sluggish EU market growth, resulting from reduced cooperation among Member States. The adverse effects of reduced trade are further exacerbated by the concentration of innovation and investment in core areas of each Member State, leading to a decline in GDP per capita in 2035, particularly in north-western regions that are not centres of economic activity and innovation. Although this trend contributes to a narrowing of regional disparities, it comes at the cost of weak overall growth.

In contrast, the MASST-5 projections suggest that the technological challenge favours highly innovative regions, with more developed and transition regions in north-western EU and southern EU expected to gain in all four scenarios (Table 3). Conversely, transition and less developed regions in southern EU and most regions in eastern EU, which have lower capacities for innovation and technology adoption, are projected to experience a decline in GDP per capita relative to the EU average.

([20]) In this scenario in Table 2, the difference between GDP per head in 2035 for all groups and the EU average is negative, indicating that , in all groups, the share of regions having GDP per head above the EU average growth is above 50%, so that only a minority of regions have a higher than average GDP per head.

Table 2 - Effects on cohesion: Globalisation and technological change, using the EU-EMS model

Median GDP per head growth of EU regional groups in 2035 relative to the EU average (percentage points differences)

Geographic group	Cohesion Policy group	Number of regions	Scenario 1 EU cooperation / global integration	Scenario 2 EU cooperation / global frag-mentation	Scenario 3 EU competition / global integration	Scenario 4 EU competition - global frag-mentation
North - West	More developed	82	0.6	0.0	-0.3	-0.2
	Transition + Less developed*	45	1.6	0.1	-0.6	0.2
East	More developed	7	1.6	8.1	-0.2	1.4
	Transition + Less developed - low vulnerability	14	0.4	1.1	-0.2	1.2
	Less developed - high vulnerability	38	-3.0	-1.2	-0.2	1.1
South	More developed	6	0.6	0.7	-0.5	0.1
	Transition	15	-0.8	-0.2	-0.5	0.1
	Less developed	24	-2.1	-1.4	-0.5	0.4

Notes: The figures show the difference between the projected GDP per head in the regional groupings and aggregate GDP per head in the EU in 2035

*The transition regions and the less developed regions in the EU north -west are merged into a single group, as there is only one less developed region there.

For the EU east group, the transition regions are merged with less developed regions, with low vulnerability to globalisation. These regions are those that are highly industrialised and highly integrated into EU value chains. Examples include: Střední Čechy and Jihovýchod in Czechia, Közép-Dunántúl in Hungary, Śląskie and Wielkopolskie in Poland, Vzhodna Slovenija in Slovenia and Západné Slovensko in Slovakia.

As a result, the technological challenge has the potential to widen regional disparities in the EU. The extent of this widening gap is most pronounced in scenario 1, where both global and EU cooperation are present, and decreases in each subsequent scenario. Notably, this suggests a correlation between the widening of regional disparities and the EU's overall growth performance - the higher the EU's aggregate growth rate, the more regional disparities are projected to increase.

Table 3 - Effects on cohesion: Globalisation and technological change, using the MASST-5 model

Median GDP per head growth of EU regional groups in 2035 relative to the EU average (percentage point differences)

Geographic group	Cohesion Policy group	Number of regions	Scenario 1 EU cooperation / global integration	Scenario 2 EU cooperation / global frag-mentation	Scenario 3 EU competition / global integration	Scenario 4 EU competition - global frag-mentation
North - West	More developed	82	0.2	0.1	0.4	0.2
	Transition + Less developed*	45	0.2	0.1	0.0	-0.1
East	More developed	7	-1.0	-0.6	-0.1	0.0
	Transition + Less developed - low vulnerability	14	-1.1	-0.6	-0.1	0.0
	Less developed - high vulnerability	38	-1.1	-0.7	-0.2	0.0
South	More developed	6	0.5	0.2	0.5	0.4
	Transition	15	-1.6	-0.9	-0.4	-0.1
	Less developed	24	-2.7	-1.4	-1.3	-1.0

Notes: The figures show the difference between the projected GDP per head in the regional groupings and aggregate GDP per head in the EU in 2035

*The transition regions and less developed regions in the EU north-west are merged into a single group, as there is only one less developed region there.

For the EU east group, the transition regions are being merged with less developed regions with a low vulnerability to globalisation. These regions are those that are highly industrialised and highly integrated into European value chains. Examples include: Střední Čechy and Jihovýchod in Czechia, Közép-Dunántúl in Hungary, Śląskie and Wielkopolski in Poland, Vzhodna Slovenija in Slovenia and Západné Slovensko in Slovakia.

Main takeaways

- Global integration, characterised by increasing world trade and investment flows, has a positive impact on the EU's aggregate growth, but may also lead to a concentration of economic activity in core areas, exacerbating regional disparities within the EU.
- Integration into global value chains is crucial for regions to benefit from globalisation. Consequently, the more developed, transition, and less developed regions in eastern EU that are less vulnerable to globalisation may gain, while the more vulnerable less developed regions, lacking strong integration, may lose out.

- Transition regions in north-western EU may benefit from increased global integration, but this is contingent upon stronger EU cooperation to enhance their competitiveness and innovation potential. In contrast, transition regions in southern EU and less developed regions may struggle due to their relatively low competitiveness.
- Global fragmentation could favour transition and less developed regions integrated into EU value chains, as they may benefit from the reshoring of activities previously located outside the EU.
- A decline in global trade and investment flows, coupled with a concentration of investment and innovation in core areas within EU Member States, may adversely affect many more developed and transition regions in north-western EU, as well as more developed regions in southern and eastern EU. This could lead to a narrowing of regional disparities, not due to accelerated growth in less developed regions, but rather as a result of slow overall EU growth, with many more developed regions experiencing lower growth rates.
- • An accelerated pace of technological progress has the potential to widen regional disparities across the EU, as economically stronger regions are better equipped to absorb new technologies and drive innovation.

3.2. Demographic challenge

The scenarios projected by the EU-EMS and the E3ME models ([21]) to represent the demographic challenge include increased migration into the EU from outside, more movements within and between Member States, and changes in the participation of women in the workforce. All of these affect the supply and use of labour in the different regions. As above, the focus here is on the impact of these changes on regional disparities across the EU.

The projections of the two models are diametrically opposed, because of the different assumptions they adopt with regard to an increase in population movements between regions.

The E3ME model, a demand-led Keynesian-type model, assumes that GDP responds slowly to changes in labour supply resulting from inward or outward migration. This implies that changes in labour supply will likely affect labour demand only after a significant time lag. In contrast, the EU-EMS model, a neo-classical general equilibrium model, assumes that changes in labour supply are immediately reflected in equivalent changes in labour demand and GDP.

([21]) A detailed description of the models and the modelling approach is provided in the Methodological and the Interim Report of the study, annexed to the Final Report.

Consequently, the E3ME projections show that changes in labour demand lag behind changes in population, which may not necessarily translate to the same change in the working-age population. This lag can initially lead to an increase or decrease in unemployment or inactivity. In contrast, the EU-EMS projections assume that changes in population directly impact employment without affecting unemployment or inactivity.

As a result, GDP per capita may decline in the E3ME projections if the demand for employment lags sufficiently behind an increase in population. Conversely, GDP per capita may even increase in these regions of origin if GDP does not decrease in line with population.

In contrast to the E3ME model, the EU-EMS projections assume that labour markets, like other markets, will always tend towards equilibrium, where supply and demand are balanced. As a result, the movement of population has a negligible impact on GDP per capita in both destination and origin regions, although other concurrent developments may still affect it.

The two models illustrate distinct aspects of the demographic challenge. The E3ME projections emphasize the significance of labour market adjustment processes and their pace, highlighting the potential for short-term imbalances. In contrast, the EU-EMS projections represent long-run outcomes, where these adjustment processes are complete, and labour markets have reached equilibrium. This equilibrium is achieved through increased labour mobility between regions and Member States, which is a key assumption in the EU-EMS model.

Both models downplay the role of external factors, such as outward migration, in shaping their projections. Consequently, the differences between global integration and global fragmentation scenarios are minimal. As a result, the models' projections are more relevant for EU cooperation than EU competition.

In the context of EU cooperation, the EU-EMS model projects that population migration will lead to higher GDP growth in more developed and transition regions, particularly those with higher productivity. As people move to these regions and enter employment, they are assumed to contribute to GDP at the same level as existing workers. This effect is expected to be especially pronounced in the more developed regions of Eastern Europe, particularly in capital city regions.

Furthermore, the results suggest that more developed and transition regions in northwestern Europe, which are more vulnerable to demographic pressures, may benefit disproportionately from population inflows in cooperation scenarios. By mitigating the negative impacts of demographic change, these inflows can help alleviate some of the pressures facing these regions.

The E3ME model projects a distinct pattern of regional effects. Similar to the EU-EMS projections, it forecasts above-average GDP growth in more developed regions (excluding Eastern Europe) and below-average growth in less developed regions. However, population growth in both types of regions outpaces GDP growth, leading to a decrease in GDP per capita. In more developed regions, population growth exceeds GDP growth, resulting in GDP per capita below the EU average by 2035. In contrast, less developed regions experience a more rapid decline in population than GDP, leading to a decrease in GDP per capita, particularly in Southern Europe.

In EU competition scenarios, which assume no inter-regional migration, the EU-EMS model predicts that regions with a history of large outflows will benefit economically from a larger population. Conversely, urbanised and more developed regions will experience a smaller population. As a result, less developed regions in Eastern and Southern Europe will see an increase in median GDP per capita, surpassing the EU average by 2035. Conversely, more developed regions will experience a decline in GDP per capita due to lost production capacity.

In the E3ME projection, GDP per capita in different regions is primarily influenced by relative changes in population. Regions with higher population growth than the EU average, such as more developed and less vulnerable transition regions in Northwestern Europe, will experience lower GDP per capita by 2035. In contrast, regions with slower growth or decline, including more vulnerable transition regions in Northwestern Europe and regions in Southern and Eastern Europe, will see higher GDP per capita. This is because GDP growth lags behind population growth in each region. Consequently, regional disparities are projected to narrow in these scenarios.

Main takeaways

- According to the E3ME model, initial population inflows into more developed regions may temporarily depress GDP per capita until labour markets adjust. However, in the long run, these inflows can lead to increased GDP per capita as the new arrivals find employment and contribute to the regional economy.
- In contrast, the EU-EMS model suggests that less developed regions experiencing population outflows may experience a short-term increase in GDP per capita if GDP growth lags behind the decline in population and employment. However, in the long run, GDP per capita is likely to be negatively affected by the exodus of relatively young and highly educated workers, leading to skill shortages and decreased regional competitiveness. This is consistent with the E3ME model's projections, which highlight the negative impact of population outflows on less developed regions.

- Overall, both models suggest that population flows between regions are likely to exacerbate regional disparities in the long run, as more developed regions absorb skilled workers and less developed regions face brain drain and reduced economic potential.

Table 4 - Effects on cohesion: Demographic change, using the EU-EMS and E3ME models

Median GDP per head growth of EU regional groups in 2035 relative to the EU average (percentage point differences)

Geographic group	Cohesion Policy group	Number of regions	EU-EMS		E3ME	
			EU cooperation	EU competition	EU cooperation	EU competition
North - West	More developed - low vulnerability	73	-0.6	-0.2	-0.7	-0.6
	More developed - high vulnerability*	9	1.3	-1.9	1.9	1.3
	Transition and less developed - low vulnerability	33	0.4	-0.8	0.7	0.4
	Transition - high vulnerability	12	-0.6	-3.5	-0.5	-0.6
East	More developed	7	-1.2	-2.4	0.3	-1.2
	Transition	14	-1.1	-0.9	0.3	-1.1
	Less developed	38	-1.2	1.0	0.3	-1.2
South	More developed	6	-0.5	-1.8	-1.7	-0.5
	Transition	15	-0.4	-0.1	-1.7	-0.4
	Less developed	24	1.2	0.9	2.0	1.2

Note: * The “more developed - high vulnerability” group consists exclusively of Italian regions;

This group of regions consists of structurally weaker regions in the EU north-west, e.g. Prov. Hainaut and Prov. Luxembourg in Belgium, Brandenburg and Lüneburg in Germany, Basse-Normandie, Lorraine, Bretagne, Auvergne and Corse in France as well as Friesland (NL) and Drenthe in the Netherlands.

3.3. The transition to a climate neutral economy

The green transition involves significant structural changes in regional economies, as fossil fuel extraction is phased out, GHG emitting activities are closed down or modified, renewable sources of energy are developed and energy efficiency is increased. At the same time, , the EU's 'just transition' measures acknowledge the importance of compensating or supporting those adversely affected by the transition. The scenario analysis considers the following factors: climate change mitigation and adaptation policies, technology transfer, expansion of renewable energy, increased research, and development (R&D) and innovation expenditure, infrastructure investment to accommodate the transition, financing needs, and social policies to support those affected.

The E3ME and GEM-E3 models ([22]) used to generate transition scenarios have previously analysed and projected energy supply and use in EU Member States. Due to differences in their underlying assumptions about economic behaviour, these models produce distinct results. The Keynesian-based E3ME model suggests that the transition may widen regional disparities, whereas the computable general equilibrium GEM-E3 model indicates a potential narrowing of these disparities.

Two primary reasons explain the divergent projections:

Firstly, financing assumptions for renewable energy expansion differ between the models. GEM-E3 assumes external financing, which tends to favour less developed regions with higher renewable energy potential due to their climatic conditions. In contrast, E3ME assumes that investment in renewables and green technologies in less developed regions may crowd out other investments, with green investments primarily channelled to more developed regions where they can be utilised more effectively.

Secondly, the E3ME model is influenced by the assumption of strong path-dependence, where historical trends play a significant role in forecasting future outcomes. Consequently, regions with a strong economic base are expected to benefit more from the energy transition. In contrast, GEM-E3 assumes that regions can more readily restructure their economies and capitalise on green transition opportunities, favouring less developed regions with substantial renewable energy potential. These differences in assumptions lead to distinct regional development trajectories in the two models, highlighting the importance of considering multiple perspectives when evaluating the potential impacts of the green transition.

([22]) A detailed description of the models and the modelling approach is provided in the Methodological and the Interim Report of the study, annexed to the Final Report.

In both the E3ME and GEM-E3 models, the effects of EU cooperation versus EU competition exhibit similar trends. EU cooperation is assumed to facilitate the transfer of crucial technology and funding to the regions most challenged by the transition as well as the implementation of incentives to reduce energy consumption. This cooperation enables the EU to achieve climate neutrality by 2050. Furthermore, EU cooperation has a positive impact on green innovation, fostering convergence in research and development (R&D) spending on clean technologies across the EU, leading to more effective outcomes. The integration of energy infrastructure across the EU also intensifies, resulting in more interconnected electricity markets. In contrast, EU competition scenarios depict a slower and less coordinated e green transition progresses with limited technology spillovers and electricity market integration. Notably, EU competition scenarios assume that R&D spending on clean technologies converges less across EU regions, and green investments are primarily financed from national sources than the EU budget. Overall, however, these differences are projected to have only a relatively minor impact on regional disparities in GDP per head.

The outcome of the projections for different regions depends to a large extent on assumptions about the ease of financing of new investment, the availability of skilled labour, and the capacity of regions to restructure their production systems from carbon-intensive to clean technologies.

According to E3ME projections, regions with a strong innovation focus, a robust manufacturing base, and a specialisation in renewable energy and transport equipment production and deployment are likely to benefit more from the transition. These regions, primarily more developed north-western and southern regions, along with several north-western transition regions are expected to thrive. In contrast, eastern EU regions and the less developed regions in the southern EU may not experience the same benefits, leading to a widening of regional disparities.

The projections suggest that, under the assumptions of a strong path-dependency, the green transition may exacerbate existing regional inequalities ([23]), emphasising the need for targeted policies to support less developed regions and ensure a more equitable transition.

In contrast to E3ME, GEM-E3 assumes that external financing is readily available for new green investments, which enhances the growth potential of regions with high renewable energy potential. At the same time, developed regions with substantial carbon-intensive manufacturing sectors experience a decrease in GDP per head as a result of the transition. This is because GEM-E3 assumes that economic restructuring can occur rapidly and that investments are attracted where returns are highest. As a result, regions in the southern EU, particularly

([23]) The robustness of these results is indicated by the consistent estimates over the four scenarios.

the less developed ones with significant potential for renewable energy development, are projected to benefit the most from the transition.

Table 5 - Effects on cohesion: Transition to a climate neutral economy, using the E3ME model

Median GDP per head growth of EU regional groups in 2035 relative to the EU average (percentage point differences)

Geographic group	Cohesion Policy group	Number of regions	Scenario 1 EU cooperation / global integration	Scenario 2 EU cooperation / global frag-mentation	Scenario 3 EU competition / global integration	Scenario 4 EU competition - global frag-mentation
North - West	More developed	82	0.2	0.3	0.0	0.1
	Transition + Less developed*	45	0.4	0.4	0.3	0.3
East	More developed	7	-0.4	-0.5	-0.1	-0.2
	Transition	7	-0.2	0.0	-0.4	-0.2
	Less developed	45	-0.5	-0.5	-0.6	-0.5
South	More developed	6	0.2	0.1	0.2	0.1
	Transition	15	0.1	0.1	0.0	-0.1
	Less developed	24	-0.9	-0.8	-0.9	-0.8

Note: *The transition regions and less developed regions in the EU north-west are merged into a single group, as there is only one less developed region there.

GEM-E3's assumptions lead to a more optimistic outlook for these regions ([24]), suggesting that they can leverage their renewable energy resources to drive economic growth and converge with more developed regions. This contrasts with the E3ME projections, which suggest that regional disparities may widen. The GEM-E3 scenario implies that targeted investments in renewable energy can help bridge the economic gap between regions and promote a more equitable transition.

The two models highlight the importance of two key determinants of the regional effects of the green transition: the ability to secure financing for the necessary investments and the capacity to restructure the economy and reorganise

([24]) This result for the less developed regions in the south of the EU is highly robust over all four scenarios.

production as fossil fuel extraction and use of are phased out. Both factors contribute to the potential widening of regional disparities during the transition.

Table 6 - Effects on cohesion: Transition to a climate neutral economy, using the GEM-E3 model

Median GDP per head growth of EU regional groups in 2035 relative to the EU average (percentage point differences)

Geographic group	Cohesion Policy group	Number of regions	Scenario 1 EU cooperation / global integration	Scenario 2 EU cooperation / global frag-mentation	Scenario 3 EU competition / global integration	Scenario 4 EU competition - global frag-mentation
North - West	More developed	82	-0.2	-0.2	-0.1	0.0
	Transition + Less developed*	45	0.3	0.2	0.2	0.3
East	More developed	7	-0.4	-0.2	-0.8	-0.6
	Transition	7	-0.1	0.5	-0.4	-0.5
	Less developed	45	0.0	0.3	-0.1	-0.2
South	More developed	6	0.1	0.1	-0.1	0.0
	Transition	15	0.1	0.0	0.2	0.0
	Less developed	24	1.7	1.1	1.4	0.8

Note: *The transition regions and less developed regions in the EU north-west are merged into a single group, as there is only one less developed region there.

Main takeaways

- According to the E3ME model, the impact of the green transition on regional disparities across the EU is heavily influenced by the availability of financing, the location of investments in renewable energy development, , and the pace at which economies can adjust to the phase out of carbon emissions. The model suggests that if financing needs are not met, more developed regions will likely benefit most from the transition.
- In contrast, the GEM-E3 model highlights the potential for less developed regions, particularly in Southern Europe, to capitalise on their renewable energy potential and drive their development through this sector, provided that financing needs can be met.
- The differing assumptions between the two models emphasise the importance of financing and economic restructuring in shaping the regional

effects of the green transition. While the E3ME model suggests that regional disparities may widen, the GEM-E3 model offers a more optimistic outlook, with opportunities for less developed regions to converge with more developed ones.

3.4. Combined impact of the challenges

Having examined the potential effects of the three challenges separately, it is essential to consider their combined effects on the pattern of regional development, as all three challenges can reasonably be expected to occur simultaneously.

To assess the joint effect of these challenges, an impact indicator has been estimated to aggregate the results of the three challenges. A 'double difference' measure is used to make the model results as comparable as possible.

The indicator is calculated as follows.

Firstly, the model projections of regional GDP per head in 2035 are normalised by relating them to the projected average EU growth under the scenario (relative to the baseline). This step provides a comparable basis for analysing the results (see the figures in the tables above).

Secondly, the difference between the normalised GDP per head in 2035 for each region and the average of these for all regions is calculated for each scenario and model. This step highlights the relative performance of each region compared to the EU average.

Thirdly, these ‘double difference’ levels for the two different models used are averaged for each challenge. This step combines the results of the two models to obtain a more robust estimate of the joint effects.

Fourthly, the resulting averages are summed up for the three challenges. This step aggregates the joint effects of the three challenges to provide a comprehensive impact indicator.

The resulting impact indicator shows that, for the transition and less developed regions, a positive value means that GDP per head is projected to grow faster than the EU average indicating a narrowing of regional disparities. Conversely, a negative value implies a widening of disparities. The results are presented in Table 7.

Table 7 - Combined impact of the three challenges, by regional groupings

Impact indicator values (percentage point differences to the normalised median regional growth, average over the challenges)

Geographic group	Cohesion Policy group	Number of regions	EU cooperation		EU competition	
			Global integration	Global frag-mentation	Global integration	Global frag-mentation
			Scenario 1	Scenario 2	Scenario 3	Scenario 4
North - West	More developed	82	0.9	0.2	0.1	0.1
	Transition + Less developed*	45	0.7	-0.1	-0.6	-0.6
East	More developed	7	4.8	5.6	-2.1	-0.8
	Transition	7	0.7	1.3	-1.8	-0.8
	Less developed	45	-2.0	-1.2	0.1	0.1
South	More developed	6	0.8	0.0	-1.0	-0.8
	Transition	15	-0.5	-0.6	0.3	0.1
	Less developed	24	-0.8	-0.8	1.8	2.0

Note: *The transition regions and less developed regions in the EU north-west are merged into a single group, as there is only one less developed region there.

When considering the challenges together, the most critical factor influencing future regional disparities appears to be the EU context whether it is characterised by ‘cooperation’ or ‘competition’.

In a scenario of EU cooperation, projections suggest that more developed and transition regions in the eastern EU are likely to gain in terms of GDP per head, whereas less developed regions in both the eastern and southern EU are expected to experience losses. However, it is noteworthy that the more developed regions, particularly those that are highly integrated into the global economy, are projected to gain more than the other regions. This suggests that regional disparities across the EU are likely to widen, as the already more developed regions are expected to reap the greatest benefits from the cooperation scenario. In a scenario of EU competition, the results suggest the opposite. By 2035, more developed regions in the east and south, as well as transition regions in the north-west and east, are projected to have a lower GDP per head than the EU average. Conversely, less developed and transition regions in the south are expected to experience a higher level of GDP per head. Consequently, regional disparities are anticipated to narrow in this scenario.

Two crucial points warrant reiteration in relation to these projections . Firstly, cooperation as defined in the scenarios should not be conflated with a strengthening of Cohesion Policy. In this study, cooperation refers to the intensification of joint actions between Member States, such as collaborative efforts in technology and innovation, or the facilitation of internal labour mobility within the EU. Notably, this form of cooperation is likely to benefit more developed regions, which are better positioned to capitalise on its benefits, potentially placing the less developed regions at a disadvantage.

In contrast, competition as defined in the models scenarios, is associated with skilled labour remaining in less developed regions to a greater extent, and R&D and investment in new production methods being more dispersed across the EU. This suggests that, as the EU becomes more integrated, the need for Cohesion Policy may increase, rather than decrease, - i.e. to counter the forces driving economic activity towards the most productive locations. Indeed, the architects of the single market recognised this potential outcome and strengthened Cohesion Policy at the same time as the market was further unified.

The second point is that the scenarios exhibit significant differences in the overall GDP per head growth across the EU. While the less developed regions may experience higher growth rates in the EU competition scenario than in more developed regions, overall growth remains lower than in the cooperation scenario. Indeed, less developed regions may achieve higher GDP per capita in absolute terms in the cooperation scenario, than in the competition scenario, despite the wider gap with the more developed regions. This possibility echoes the long-standing debate on Cohesion Policy: whether it is more effective to invest in stronger regions where growth returns are likely to be higher and weaker regions may benefit from the overall growth, or to invest directly in less developed regions.

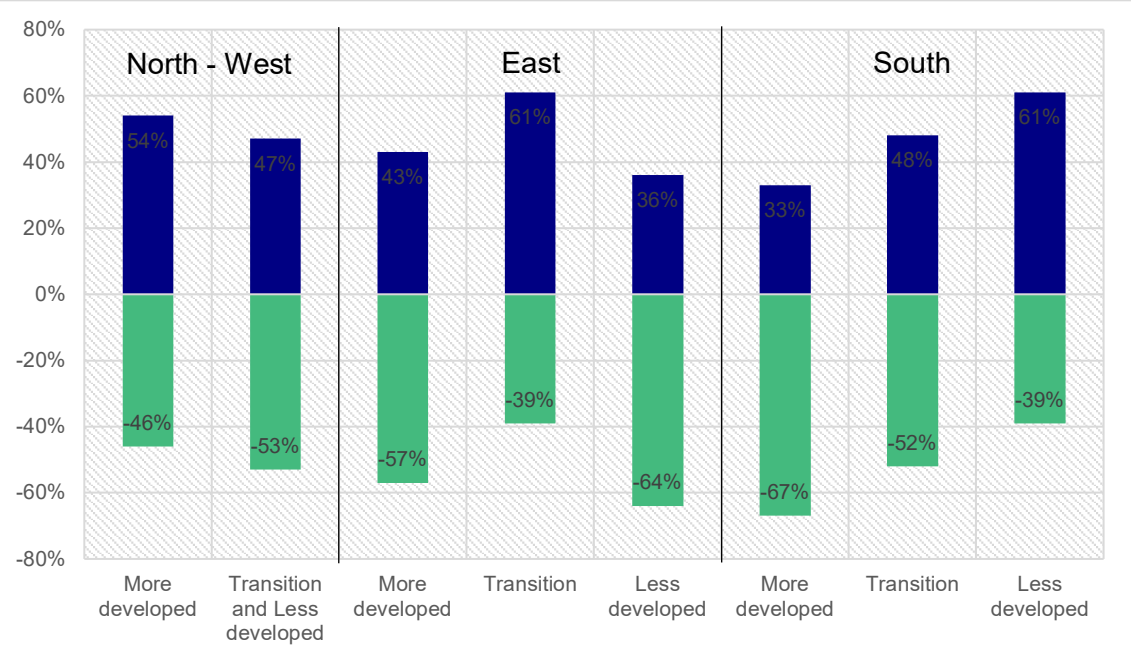
It is worth also reiterating that regional projections within the Cohesion Policy categories of regions exhibit significant variability. For example, while on average more developed regions in the north-western EU are expected to experience the largest gains in GDP per head when the three challenges are combined in the EU cooperation - global integration scenario, this trend does not hold universally across all more developed regions. Notably, only approximately 54% of these regions are also projected to have GDP per head above the EU average by 2035.

Furthermore, significant disparities in GDP per head are also observed within the other categories of regions, in most cases the proportion of regions experiencing gains or losses tending to be more pronounced. This suggests that the unique characteristics of regions play a more decisive role in determining whether they benefit or lose from the challenges relative to the EU average, rather than their membership in a specific Cohesion Policy category of regions or geographic location within the EU.

Main takeaways

- The projections from the EU cooperation and EU competition scenarios suggest that policymakers may face a trade-off between maximising economic growth and reducing regional disparities. According to the models, concentrating investment in the more developed regions, as in the EU cooperation scenario, can generate the highest returns, but may also exacerbate regional inequalities. In contrast, directing investment towards the less developed regions, as in the EU competition scenario, may help reduce regional disparities, but potentially at the cost of lower returns.
- In the EU context, this dilemma can be framed as a choice between sectoral policies, which rely on market forces or competition between projects to allocate investment, and place-based policies, which prioritise the unique characteristics of specific territories to address location-specific barriers to growth.
    - The EU cooperation scenarios illustrates the former approach, concentrating investment in regions with the highest growth potential, and leveraging collaborative efforts, facilitated internal labour mobility and economic spill overs across the EU to drive regional convergence and development.
    - In contrast, in the EU competition scenarios, where Member States and regions exhibit lower levels of cooperation and integration, EU investment in specific regions becomes a more strategic approach and an imperative to promote regional development. By directing EU investment towards regions with specific needs and challenges, policymakers can help address the disparities that hinder regional growth and development and ultimately strengthen the EU's overall economic resilience.
- Notably, the projections from scenarios reveal that the differences in the impact of the challenges on GDP per capita within categories of regions are significantly larger than the differences in the average impact between these categories. This suggests that the specific characteristics of each region, such as its industry mix, skills base, and infrastructure, are more important than its GDP per capita level or geographic location in determining its economic performance.

Figure 2 - Share of regions that gain or lose from the challenges, average over all four scenarios



Note: Positive numbers indicate the share of regions that gain from the challenges, negative numbers indicate the share of regions that lose.

4. Case studies

To complement the scenario analysis, a series of case studies were carried out in a selected number of Member States and regions. These case studies aimed to provide a more nuanced understanding of how the three challenges are likely to impact individual regions, taking into account their specific characteristics, the perspectives of authorities and relevant stakeholders, and action taken or planned in response.

The case studies also examined issues related to the implementation of EU, national and regional cohesion policy programmes, which are crucial for informing future EU policy and funding design. This involved conducting interviews with responsible officials and local experts followed by focus group meetings to gather additional insights.

13 EU Member States and 41 of their regions ([25]) were selected for the case studies, representing a range of geographical, historical and economic contexts (Annex 1). The selection was informed by the vulnerability analysis presented in Chapter 2 and the current Cohesion Policy classification of categories of regions, ensuring that the regions and countries covered are representative of the EU as a whole. All the larger Member States were included, along with a variety of regional settlement patterns and locations such as capital cities, metropolitan, non-metropolitan and rural regions, cross-border, peripheral and central regions

The case studies provide a rich source of information on how the three challenges are perceived and addressed at the regional level. The findings are presented below for each of the challenges, offering a detailed examination of the actions being taken and the responses of local authorities and stakeholders.

4.1. Globalisation and technological change

4.1.1. Perceived nature of the challenge

The case studies shed light on specific aspects of globalisation and the imperative to remain competitive in world markets, highlighting several key take-aways:

- Global value chain risks: Economies heavily integrated into global value chains (such as Austria, Finland, Germany, Northern Italy) face risks from rising trade barriers, while those reliant on foreign direct investment (like

([25]) Annex 2 of the study presents the list of selected cases studies and the methodology for the case studies selection

Poland and Romania) are vulnerable to weaknesses in domestic growth factors. In contrast, non-export-oriented economies (such as Greece, Southern Italy, Lithuania, and Slovenia) are constrained by specialisation in low- and medium-value-added products and services, limiting their future growth and development.

- Productivity challenges: Some countries (e.g., Greece and Slovenia) exhibit low productivity compared to other EU and non-EU nations, while others (Finland and Italy) experience sluggish productivity growth over time.
- Innovation and related EU funding absorption capacity challenges: Several countries (Greece, Italy, Lithuania, Poland, Romania, and Spain) struggle with limited research and innovation capacity and inadequate absorption of EU funds for Horizon 2020's Research and Technological Development (RTD) programme.
- Technological competitiveness limitations: Numerous EU Member States face difficulties in keeping pace with the constantly evolving technological developments, particularly in critical sectors related to the digital revolution.
- Labour market constraints: Labour shortages are a widespread issue (affecting for instance Austria, Finland, Germany, and Slovenia), while a shortage of high-skilled workers hinders innovation potential in countries like Greece, Italy, Lithuania, Poland, Romania, and Spain.
- Persistent interregional disparities: Polarisation between capital regions and the rest of the country is a concern in Finland, France, Poland, Romania.

While some of these challenges are a more pronounced in the less developed parts of the EU, it is apparent that the challenge of globalisation affects all regions in different ways. Table 8 summarises the main issues reported by the regions covered in the case studies, grouped by their Cohesion Policy category of regions, providing insight into the relative importance attached to each issue at the territorial level.

In addition, a number of interesting observations came out of the interviews with regional officials and stakeholders.

In Germany, interviewees from the Sachsen region, a leading location for semiconductors manufacturing (accounting for around a third of the EU's microchips production), expressed concern over the high dependence on imported raw materials and energy. The recent Russian war of aggression against Ukraine has highlighted this vulnerability, as it disrupted energy supplies and drove up prices.

Table 8 - Globalisation and technological change: challenges reported by regions – numbers of regions

Main problems	More developed	Transition	Less developed	Total
Low innovation capacity	2	6	18	**26**
Low internationalisation and export orientation	2	7	13	**22**
Limited digitalisation	2	2	11	**15**
Reliance on international value chain	3	5	3	**11**
Specialisation in low value-added and low growth potential sectors	1	0	5	**6**
Number of regions in the sample	**10**	**11**	**20**	**41**

Source: Case studies carried out for the present project.

In Austria, the focus is on strengthening integration into the regional value-chains centred on Germany, which also involve Czechia, Hungary and northern Italy. This strategy aims to provide a bulwark against globalisation, despite the potential risk of vulnerability to regional economic downturns

In Romania, which has become an attractive destination for FDI, particularly in the automotive and related manufacturing sectors, concerns revolve around potential supply chain disruptions as experienced during the COVID-19 pandemic. Moreover, there are worries about the concentration of investment in the capital city region, which has led to significant influx of labour and entrepreneurial talent from the other parts of the country. This, in turn, has exacerbated regional disparities.

A similar trend is observed in other central and eastern European countries, where concerns about FDI In conjunction with growing trade with other EU Member States and regions, FDI has become a major driver of growth in these countries. However, in Poland and several other central and eastern EU countries, trade growth has been concentrated in low- and medium-tech products, which face intense competition from less developed and emerging economies in the world.

Conversely, France has undergone a prolonged process of deindustrialisation characterised by slower growth compared to the rest of the EU. As a result, many regions are falling behind in technological advancements. Consequently, large cities like Lyon, Bordeaux, Lille and Toulouse, which historically served as hubs of economic growth and drove development in surrounding areas, are no longer

able to play the same role. This has led to widening disparities between metropolitan agglomerations and more rural areas within regions.

A similar decline of traditional industries is evident in several Italian regions, where the development of new sectors has been limited. In Sardinia, for example, the closure or relocation of chemical, steel, and textile industries has reduced the manufacturing sector to less than 10% of regional value-added. The loss of manufacturing income has not been compensated by the growth of tradeable services.

4.1.2. Responses to the challenge

In response to the challenges posed by globalisation, Member States and their regions are implementing a range of strategies that share common elements, albeit with varying priorities. Th include:

- increasing investment in research and technological development (RTD) to drive innovation,
- fostering closer links between research centres and business to facilitate knowledge transfer and collaboration,
- strengthening the competitiveness of small and medium-sized enterprises (SMEs),
- leveraging the opportunities presented the green transition to promote sustainable growth,
- supporting the spread of digitalisation and harnessing its benefits,
- investing in human resources to address skills mismatches and enhance workforce productivity.

While the core elements of these strategies are similar, the scope and focus of each country's approach differ. In some cases, national or regional plans have been established to bring together various programmes under several EU funds and initiatives.

Germany, for instance, has placed a strong emphasis on ensuring that its industries with a comparative advantage, such as the automotive and related sectors, are at the forefront of the green transition.

Similarly, other countries have incorporated measures to enhance competitiveness and sustainability into broader development plans, such as:

- Greece’s “Plan for the Development of the Greek Economy”),
- Romania’s “National Long-term Strategy for the Sustainable Development”

- France's "France Relance" In addition, funding of up to EUR 54 billion has been made available under the "France 2030" Strategy, partly financed by EU "Next Generation", to pursue industrial, environmental, and social objectives through technological innovation and support for new firms in strategic sectors.
- In Cyprus, digital connectivity is seen as a major means of capitalising on the benefits of globalisation and an integral part of the country's New Industrial Policy 2019-2030, designed to attract FDI and entrepreneurial talent and to establish Cyprus as an international high-growth business centre.
- Poland has developed several strategies aimed at fostering innovation and connectivity. ([26])
- Portugal has adopted a more specialised approach, with at least six plans focused on leveraging the digital transition to strengthen competitiveness. ([27]) These plans are complemented by national and regional Smart Specialisation Strategies, which identify areas of comparative advantage and target investments accordingly.

Austria's Digital Action Plan is another notable example, with a commitment to invest some EUR 1.5 billion in the digital transformation between 2022 and 2025, encompassing both infrastructure development and digital applications. Such strategies play a vital role in enhancing competitiveness in response to globalisation, particularly in less developed regions, where EU Cohesion Policy funds often provide essential financing for corresponding programmes.

Regional responses to globalisation exhibit significant differences in their targets and approaches. In Italy, particularly in the southern regions, the primary focus is on safeguarding existing industries from external competition, rather than exploring new opportunities presented by the green and digital transitions. This protectionist approach is a common thread in many weaker regions, especially in the south, where policy efforts are geared towards preserving the status quo rather than driving innovation and growth. In contrast, more dynamic regions like Emilia Romagna and, to a lesser extent, Toscana, are taking a more proactive approach, seeking to capitalize on their potential and exploit the opportunities offered by the green and digital transitions.

Despite a general acknowledgement of the challenges posed by globalisation and the need for a response, the case studies reveal that, in many cases, actions taken or planned are fragmented and lacking in coherence. An underlying logic

([26]) "Responsible Development" (approved in 2017), "Human Capital Development 2030", "Sustainable Development 2030" and "Regional Development 2030"

([27]) "Digital Transition Action Plan", "National Data Strategy," "National Blockchain Strategy", "National Artificial Intelligence Strategy", "National Advanced Computing Strategy" and "National Cyberspace Security Strategy"

or plan is often absent, leaving unclear how various elements of a strategy or different plans fit together. This lack of cohesion undermines the effectiveness of regional responses to globalisation, making it essential to adopt a more integrated and strategic approach.

4.2. Demographic challenges

4.2.1. Perceived nature of the challenges

Demographic challenges, viewed through a regional lens, are multifaceted and far-reaching, encompassing not only the consequences of ageing populations and low birth rates, but also the impacts of migration, population movements, and skill mismatch. These interrelated dynamics culminate in in labour shortages that pose a significant obstacle to local development, affecting both more developed and less developed regions. A comprehensive analysis of the case studies reveals the primary concerns of the three Cohesion Policy categories of regions, as presented in Table 9. This provides a nuanced understanding of the relative importance assigned to each problem, offering a snapshot of the demographic challenges faced by regions.

There is a shared recognition among regions of the underlying demographic trends driving these challenges. The convergence of low and declining birth rates, increasing life expectancy and population ageing is resulting in a shrinking working-age population labour force. This, in turn, has sparked widespread concerns about the sustainability of social security and care systems, as the number of retirees increases and the number of working-age individuals available to support them -decreases.

Furthermore, regions are increasingly aware of the potential labour shortages, which can be exacerbated by inward migration, leading to integration challenges and social unrest. Additionally, internal population movements within and between regions can contribute to depopulation in rural areas, as young people relocate, resulting in an ageing population and a decline in the overall population.

Within countries, a notable dichotomy exists between large cities and their surrounding areas, which are typically experiencing population growth and influxes of new residents, and rural areas where where out-migration is a persistent trend. This phenomenon is evident in France, where most regions in the centre are expected to decline in population, while major metropolitan areas such as Paris and Lyon and their suburbs are expected to continue growing. Similarly, in Italy, a long-standing trend of migration from the less developed southern regions to the north of the country and other parts of Europe persists . At the same time, some more developed regions in the north, such as Liguria and

Piemonte, are also experiencing population decline due to a combination of outflows and low birth rates.

Table 9 - Demographic challenges: problems reported by regions – numbers of regions

Main problems	More developed	Transition	Less developed	Total
Labour shortage	8	4	14	**26**
Ageing	5	2	11	**18**
Brain drain	3	2	12	**17**
Population shrinking	2	6	8	**16**
Integration of migrants	0	8	8	**16**
Low birth rate and shortages of young people	3	2	9	**14**
Lack of skilled workers and skill mismatch	4	4	2	**10**
Number of regions in the sample	**10**	**11**	**20**	**41**

Source: Case studies carried out for the present project.

In many European countries, urbanisation and migration patterns are resulting in significant regional disparities.

In Spain, the influx of people to urban areas has led to depopulation and an ageing population in rural areas, making it challenging to maintain essential services. Conversely, urban areas are facing congestion and pressure on land use and social services.

In Finland, the Helsinki metropolitan area is working to manage population growth sustainably, while other regions struggle to maintain economic viability. In Poland, many large cities are experiencing population decline in the centre, as residents move to the suburbs.

In contrast, inward migration from outside the EU has helped offset the impact of ageing in Germany and Austria, although this has also raised integration challenges. In Austria, 18% of the population were non-nationals in 2022. In Austria, for instance,18% of the population were non-nationals in 2022.

The free movement of people within the EU has also led to significant migration flows. Since Poland's accession to the EU, many of its citizens have moved to other parts of the EU, contributing to labour shortages in their host countries but

also having negative social and economic repercussions in Poland. The outflow of skilled and highly educated individuals has resulted in a "brain drain," leaving many rural areas depopulated and with an unbalanced age structure. Similar trends have been observed in Romania, where large-scale outflows of population, particularly the more educated, have occurred in the north-east of the country. The systemic lack of infrastructure, public services and facilities have deterred and continue to deter people from remaining in or returning to these regions.

Austria's Steiermark region is also experiencing concerns about brain drain and skill shortages. Despite being a more developed region, Steiermark is at risk of losing highly educated young people to Vienna and other parts of the EU, while struggling to attract labour from neighbouring regions in Hungary and Slovenia.

Brain drain is a widespread issue in several European countries, including Greece, Portugal, Spain and Italy. In these countries, inward migration from outside the EU does not compensate for the outward movement of young people with high levels of education, exacerbating regional disparities and labour shortages.

4.2.2. Responses to the challenges

Demographic trends, which encompass natural changes in population, are frequently acknowledged in national and regional development plans, but they are often viewed as inevitable and only addressed through adaptation ([28]). In contrast, migration and internal population movements are approached more proactively.

The primary concerns associated with demographic trends, such as their impact on social security, care systems and labour supply are interconnected. In response to these challenges, various regions have implemented distinct strategies. For instance, Upper Austria has focused on supporting the training of care professionals and simplifying entry requirements for foreign professionals. In countries like Lithuania, Romania, Portugal, Slovenia, Finland, and Cyprus, the emphasis is on coping with the growing elderly population by strengthening public healthcare and social services, as well as promoting active ageing. Digitalisation and remote service provision are seen as crucial tools in addressing the shortage of care professionals. Measures to support active ageing are evident in a number of countries. For instance, Slovenia has implemented an “Active Ageing Strategy” aimed at encouraging and facilitating employment for all age groups, including

([28]) Poland is an exception, as one of the few countries attempting to raise the birth rate by a series of measures, mainly in the form of financial incentives, such as a PLN 500 (around EUR 115) monthly allowance for each child irrespective of family income, tax allowances for families with children, and “motherhood pensions” of around EUR 280 a month for women aged 60 and over who had given birth to 4 or more children.

through easier access to education and training and better working conditions. In contrast, Greece's primary focus is on increasing participation in the labour force by raising the proportion of working-age population in employment. This is particularly done by providing support for women to balance working and family life. Similar attempts to increase labour force participation have been reported in several countries, including Germany, Italy, Spain, and Cyprus. These initiatives mainly take the form of active labour market policies designed to enhance employability worker productivity. Often, these policies are combined with, support for SMEs to strengthen their competitiveness, which can also be seen as a response to the challenge of globalisation. In response to a decline in the working-age population, Greece has sought to attract skilled migrants by removing the requirement for labour shortages in specific sectors of employment. Additionally, the country has streamlined the process for foreign nationals to create businesses and improved qualification recognition procedures. These changes are complemented by policies encouraging Greeks living abroad to return, through targeted campaigns highlighting available opportunities.

In Spain, EU Cohesion Policy support has been utilised to facilitate the integration of migrants, particularly those from North Africa, into the labour market and society. This initiative aims to address the significant influx of migrants in recent years.

In response to depopulation, a widespread issue affecting many EU regions, especially peripheral areas, the primary approach involves transferring investments and channelling funds to the affected regions. A notable example is Castilla-La Mancha in Spain, where investment support and tax incentives have been employed to stimulate rural development, partially financed by Cohesion Policy funding.

Similarly, in Aragon, legislation enacted in 2023 specifically targets the revitalization of rural areas through tax incentives and measures to improve access to housing and social services. These initiatives aim to encourage existing residents to stay and attract new inhabitants to the region.

In Tuscany, Italy, place-based territorial strategies have been implemented in areas struggling with depopulation and population ageing. These strategies focus on supporting local development and providing access to essential services, ultimately contributing to the revitalisation of these regions.

In summary, the response across the EU to the demographic challenge has been twofold. On the one hand, authorities have sought to expand the available work force by implementing measures that enable people, particularly women, to balance work with caring responsibilities, This has been achieved through active labour market policies aimed at increasing the employability of those not in work, as well as encouraging older individuals to remain in employment longer. On the other hand, regions have endeavoured to enhance their attractiveness as places to live and work, with the goal of attracting both individuals and businesses to

stay and relocate there. By implementing such strategies, the aim is to address the demographic challenges and promote sustainable economic growth.

4.3. Climate change and green transition

4.3.1. Perceived nature of the challenge

Issues arising in EU regions as a consequence of the transition to climate neutrality are very varied, depending on their geophysical features, their climate, land use, infrastructure, composition of economic activity, and existing patterns of energy supply and use, as well as where they are on the path to carbon neutrality. Table 10 lists the main problems relating to the green transition reported by regions in the case studies and the number of regions concerned. Regions are grouped by Cohesion Policy category to give an indication of the relative importance attached to them.

Table 10 - Climate change and green transition: main problems reported by regions – numbers of regions

Main problems	More developed	Transition	Less developed	Total
Brown industries	5	4	14	**23**
Energy-intensive industries	4	6	13	**23**
Presence of coal mining industry and coal phase-out	4	3	14	**21**
Individual transport pollution - car dependency/lack of public transport	1	4	10	**15**
Low-efficiency buildings	2	2	5	**9**
Green tech - insufficient development/deployment of green tech sector	0	1	0	**1**
Number of regions in the sample	**10**	**11**	**20**	**41**

Source: Case studies carried out for the present project.

A major issue for regions dependent on fossil fuel extraction and brown industries is the significant challenge they face in diversifying into new economic areas, creating alternative sources of income and employment. The case studies from Germany, Poland, Romania, Slovenia, and Spain highlight the complexities

surrounding energy sources and uses. In contrast, the case studies from Austria, Finland, Lithuania, Romania, Slovenia, and Spain underscore the importance of addressing transport-related issues. Specifically, these issues are linked to manufacturing in Austria and to the sectors of agriculture, forestry, and land use in Finland.

Transitioning away from energy-intensive industries and fossil fuel extraction poses a significant challenge for regions where these activities are deeply ingrained in their production systems. This is particularly evident in several regions of Poland, which collectively accounted for 96% of the EU's hard coal mining in 2021 and were the second-largest source of lignite. The country's heavy reliance on coal for electricity generation (60%) and widespread use in heating has resulted in severe air pollution in many regions. For instance, the Bełchatów open-cast lignite mine in Łódzkie, a less developed region, is the largest single source of CO2 emissions in the EU. However, even in Poland, coal production is concentrated in a few regions. In contrast, Pomorskie, another less developed region, has made significant strides in renewable energy, with over half of its electricity generation already coming from sustainable sources.

In Germany, coal extraction remains a significant industry, but it is largely concentrated in a few regions, primarily the Ruhr in the west and Brandenburg in the east. Unlike in Poland, however, Germany has a clear commitment to phasing out this pollutive industry.

Furthermore, coal extraction in other parts of the EU is often located in less developed, economically depressed regions, such as Greece's Dytiki Makedonia in the north-west. This region is a major producer of lignite, which accounts for a substantial proportion of its GDP. Unfortunately, it also has the highest unemployment rate in the country (nearly 17% in 2022) and has experienced significant out-migration in recent years. Slovenia's Zasavska area is another example, where coal mining remains important, despite having the lowest GDP per capita in the country.

Phasing out brown industries in these depressed regions poses significant challenges, particularly in terms of developing alternative sources of economic activity and job opportunities. However, some EU regions have successfully transitioned to more sustainable sources of power generation. In Finland's Pohjois-Pohjanmaa region, for instance, wind farms have been installed, producing almost half of the country's energy. This transition was facilitated by the region's abundance of peat, which was historically used for heating and electricity production.

In many cases, the shift to renewable energy sources and reduced energy consumption is linked to the challenges posed by globalisation. For example, in Basilicata, a rural region in southern Italy, the dominant industries are oil extraction and the automotive sector, both controlled by powerful multinationals. This limited regional control over these industries hinders the transition towards

carbon neutrality, making it difficult for the region to navigate the path towards a more sustainable future.

4.3.2. Responses to the challenge

While the need to mitigate and adapt to climate change is widely recognised across the EU, as enshrined in the EU Climate Law and the Fit for 55 package, which sets ambitious targets for the EU to achieve climate neutrality by 2050 and for Member States to meet their national targets by 2030, the challenges involved in transitioning to carbon neutrality are not fully acknowledged. The challenges are multifaceted and include managing the uneven impacts of climate change across regions and social groups to prevent excessive burdens on vulnerable populations. Moreover, changing public attitudes and behaviours over a relatively short period is a challenging task. To address these obstacles, the EU has established the Just Transition Fund (JTF) to support the most affected regions and has announced the imminent launch of the Social Climate Fund. However, with a combined budget of only EUR 84 billion ([29]), these funds have limited scope and scale. Consequently, the task of driving the necessary behavioural changes remains a significant challenge.

All Member States except Poland have committed to reaching climate neutrality by 2050. However, there are large differences across the EU in the speed of implementation and the nature and scale of the measures to achieve this aim. Poland has undertaken measures to reduce reliance on coal for energy production substantially but has stopped short of committing to the 2050 target.

Elsewhere, Finland has set an ambitious target to achieve carbon neutrality by 2035, with plans to modify land use to create carbon sinks. In Germany, the goal is to reach carbon neutrality by 2045, with a key step being the phase-out of coal-fired power plants in North Rhine-Westphalia by 2030. However, a major challenge for Germany is balancing its climate ambitions with the need to maintain the competitiveness of its energy-intensive industries, such as the automotive sector. These industries rely heavily on low energy costs to remain competitive, highlighting the need for affordable energy solutions that do not compromise Germany's climate goals. Romania has set its sights on reducing energy consumption in housing and offices, which accounts for nearly half of the country's total energy usage. To achieve this, the government plans to renovate the building stock, making it more energy efficient. In Portugal, a new law requires all regions and municipalities to develop action plans outlining the measures they will take to reach net zero emissions. Slovenia has also taken steps to reduce fossil fuel usage, introducing stricter regulations and offering financial incentives

([29]) EUR 84 billion in 2024 prices - Sources: Regulation (EU) 2021/1056 of the European Parliament and of the Council of 24 June 2021 establishing the Just Transition Fund; Regulation (EU) 2023/955 of the European Parliament and of the Council of 10 May 2023 establishing a Social Climate Fund.

to encourage the transition. Additionally, lignite extraction will be significantly reduced, and industries will be required to decrease their energy consumption and emissions, with subsidies available to support the modification of production processes.

Many regions have established their own climate targets and outlined measures to achieve them. In Finland, the Helsinki-Uusimaa region's "Well Ahead" vision aims to achieve climate neutrality by 2030, guided by a "Regional Climate Roadmap" that provides support and direction to municipalities. Germany's Bavarian state has passed the "Climate Protection Act", which sets a target to reduce greenhouse gas emissions per resident by at least 55% by 2030, compared to 1990 levels, and commits to achieving climate neutrality by the same year. Meanwhile, Italy's Emilia-Romagna region has announced plans to produce 100% of its energy from renewable sources by 2035.In Spain, Aragon, which produces almost the double of the national average GHG emissions per head, has launched its “Strategy for Climate Change and Clean Energy 2030”. The strategy focusses on decarbonising transport and improving energy efficiency through the use of new technology, particularly in the automotive industry. In Extremadura, where over a third of households suffer energy poverty, priority has been given to improving energy efficiency in homes in its “Integrated Energy and Climate Plan” for 2030.

Although most national and regional plans have wide coverage and often include many measures, few of them set out clear coherent strategies detailing how the overall objective will be achieved in practice. Uncertainties also remain with regard to the financing of these strategies.

The use of research and innovation and technological advance in pursuit of carbon neutrality feature heavily in many plans. In Steiermark in Austria, for example, the “Action Plan for Climate Change” relies significantly on R&D and green innovation projects which are to be supported by the regional government. In Slovenia, building a supportive and innovative environment is seen as a key means of facilitating the transition to a low-carbon economy.

In addition, all smart specialisation strategies across the EU include support for the green transition, emphasising the link between responding to climate change and the challenges of globalisation. Indeed, there seems widespread agreement that the transition will be possible only by boosting innovation and stimulating technological change to shift energy production from fossil fuels to renewables. It is also widely agreed that there will be need for new skills and competences in the work force. Potential shortages of qualified workers are seen as an important obstacle to the transition, underlining links with globalisation and demographics challenges.

The case of Poland exemplifies the significant challenges that must be overcome to achieve a green transition within the agreed timeframe. In regions where fossil fuel extraction is a major source of income and employment, resistance to the

required changes is likely to be strong. Furthermore, the costs of supporting the necessary shifts in economic activity are substantial, making it a daunting task.

External events, such as Russia's war of aggression against Ukraine, have created uncertainty and disrupted energy supplies and prices, posing a potential threat to the continued efforts to meet the 2050 target. Recent national government responses to these events have demonstrated this vulnerability. For instance, Greece's plans to phase out lignite have been revised in response to the energy crisis. Across the EU, protests from farmers and consumer reactions to green taxes and emission charges have created a breeding ground for reduced climate neutrality ambitions.

Unlike the other two challenges, estimates have been made for several countries regarding the investment costs required to transition to climate neutrality. Although these estimates vary widely and often lack clarity on what is covered, they are substantial. Across the EU, an annual investment of EUR 870 billion in transport and EUR 660 billion in energy systems is needed between 2031 and 2050 to reach the 2040 emission reduction target of 80%.The resulting energy system costs are estimated between 12.4% and to 12.9% of GDP in 2031-2040.([30]) This poses enormous challenges for Member States. In France, up to EUR 3 trillion are needed for buildings, transport, and energy by 2050. It is unclear how this required investment will be financed, especially in low-income countries like Romania, where EUR 2.1 trillion is estimated to be needed. This highlights the significant financial resources needed to support the green transition and underscores the importance of careful planning and coordination to achieve this goal.

4.4. Implications for the formulation and execution of Cohesion Policy

This section highlights key considerations that must be taken into account in the design and implementation of EU policies supporting regional-level action, particularly in response to three major challenges.

- Regions' vulnerability to the three challenges and their capacity to respond depend on a wide variety of characteristics and circumstances, which are not adequately reflected in GDP per capita, the primary criterion currently used to determine eligibility for different levels of Cohesion Policy

([30]) European Commission. SWD(2024) 63 final. Securing our future. Europe's 2040 climate target and path to climate neutrality by 2050 building a sustainable, just and prosperous society. Communication Securing our future Europe's 2040 climate target and path to climate neutrality by 2050 building a sustainable, just and prosperous society: https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/13793-EU-climate-target-for-2040_en

funding.([31]) Some of the key characteristics that vary significantly between regions in the same category of Cohesion policy regions include:

  - the sectoral structure of their economies which plays a crucial role in determining vulnerability to globalisation and the feasibility of a successful green transition;
  - the scale of employment in fossil fuel extraction and its economic significance in terms of income generation, both regionally and nationally;
  - geophysical features and geographical location which have influence the potential for developing renewable sources of energy;
  - R&D infrastructure and research and innovation capacity essential for developing and utilising new technologies;
  - labour markets and social institutions that facilitate the structural changes needed to address the challenges;
  - education and vocational training systems, vital for responding to all three challenges;
  - the degree of social cohesion, which is critical for implementing policies achieving behavioural changes in a consensual, non-conflictual manner;
  - the efficiency of systems of government in formulating and implementing necessary policies;
  - the extent to which the challenges are recognised, and action is being taken to address them.

- While the first four characteristics can be partially captured by sectoral models, the others require in-depth examination, such as through case studies, to identify the specific ways in which individual regions are affected or will be affected by the challenges and their preparedness for taking action. Although sectoral model simulations, as reported in Chapter 3, provide some insight into the pattern of regional impacts, the case studies reveal aspects that are beyond the scope of the models, enriching further the analysis.

([31]) There are a range of other criteria which determine the allocation of funding between Member States, such as levels of unemployment or other problems, but these affect the mount of funding that regions are deemed to be entitled to within the categories they are classified to – i.e. the amount that is payable to, say, a particular less developed region. The amounts concerned can vary significantly between regions according to these criteria, but it remains the case that a transition region will invariably receive less than a less developed region, irrespective of the specific problems that it faces, and the same applies to a more developed region vis a vis a transition region.

- The case studies highlight the interconnected nature of the challenges emphasise the importance of considering the interrelationship between policies when developing responses. For example, in Germany's Bayern region, the ability of the automotive industry to maintain its global competitiveness is vital for the future prosperity of the region. However, this competitiveness is also contingent upon the industry's success in developing electric vehicles, a key component of the green transition. The overlap highlights the potential for policy measures to serve multiple purposes. Accordingly, investment in RTD can, for example, drive the ecological transition of the economy while simultaneously enhancing the competitive position of industries in global markets. Furthermore, digital technologies are viewed as essential for competitiveness and the green transition, as well as for providing essential services, boosting productivity, and sustaining social welfare systems amidst an ageing population and labour shortages. . The case studies demonstrate that a region's capacity to respond to various challenges is significantly shaped by the national context and policies implemented by the central government. In most countries, regional and local authorities face substantial limitations in designing and implementing policy responses due to restricted financial resources and competences. As a result, they heavily rely on central government support in these areas. . Equally, the socio-economic context in which policies are implemented and their potential effectiveness are greatly influenced by national circumstances and policies related to macroeconomic management, social welfare, healthcare, education, migration and other factors. The overall performance of the national economy, as well as that of neighbouring regions, is also conditioned by broader trade and financial connections. This underlines the importance of considering the interplay between national and regional policies in addressing the challenges and ensuring effective policy responses. Case studies highlight the need for flexible territorial dimensions and governance arrangements in addressing regional challenges.
    - They emphasise that the national level may not be the most effective scale for responding to regional challenges, and neither is the NUTS-2 regional level always the most suitable. The NUTS-2 regions, being statistical constructs, are sometimes based on administrative boundaries, but not always. As a result, their borders may significantly diverge from the functional areas that require development planning. Hence, the territorial dimension that is relevant for development planning may be smaller than a NUTS-2 region, span across multiple regions, or even transcend national borders. In the latter two cases, cooperation between the concerned authorities is essential. In cases where the relevant dimension is smaller than a NUTS-2 region, local (sub-regional) authorities need to be engaged.

- Case studies also show that effective territorial solutions require suitable governance arrangements, which vary significantly across Member States. Some countries operate under a federal system, while others follow a unitary model. The degree of autonomy granted to regional or local authorities, responsible for putting in place and implementing development policies, also differs within each system. Their level of autonomy can significantly impact the effectiveness of territorial solutions.
- A key aspect of effective governance arrangements is the ability to adapt to regional needs. The JTF, part of Cohesion Policy, exemplifies this approach. The fund is not allocated based on NUTS-2 regions, but rather focuses on addressing transition problems at the regional scale where they occur. This flexible governance model enables targeted support for regions facing specific challenges, such as industrial decline or environmental degradation. The JTF's approach to governance could serve as a model for how Cohesion Policy addresses specific regional challenges in the future. By adopting a more flexible approach to NUTS-2 allocations, Cohesion Policy can better respond to the unique needs of each region, fostering more effective and sustainable development. This adaptability is crucial in addressing the complex and varied challenges faced by European regions. However, this approach is not without difficulties. Challenges remain as to how to evaluate the effects of the policy if the scale of application does not correspond with a statistical unit of regional classification, as discussed below.

- The variety and complexity of funding and programming is a major concern for national and regional administrators. In less developed regions, EU funds are often the primary means of financing development plans and initiatives and responding to regional challenges, and in some cases, the only available source of funding.
  - The importance of EU funding is consistently highlighted in all country studies. While Cohesion Policy funding serves as the primary source of finance, it is frequently supplemented by other EU funding sources. A notable example is the Recovery and Resilience Facility (RRF), which has its own distinct regulations and deployment conditions. The multiple funding sources and their regulatory differences, combined with varied rules for national funding sources, create a complex environment that hinders the effective deployment of support for programmes addressing long-term challenges.
  - Case studies also highlight that the involvement of various authorities in the planning process can lead to conflicting priorities and coordination challenges, drawing attention once more to the

importance of appropriate multi-level governance arrangements, administrative capacity and transparent, consultation processes. By acknowledging these challenges, policymakers can work towards simplifying the funding landscape and improving the effectiveness of support for programmes addressing long-term challenges.

- Case studies put forward examples of how Member States deal with the complexity of funding and programming. In Italy, the multitude of funding sources with different regulations and administrative arrangements has resulted in delays and strain on the authorities involved. This example illustrates the difficulties that can arise when multiple funding sources are not coordinated effectively. In Greece, the situation was initially complicated by the presence of multiple Managing Authorities responsible for Cohesion Policy funding, the Ministry of Finance handling the RRF, and a Directorate within the Ministry overseeing the National Development Programme. However, the recent consolidation of these entities under the Ministry of National Economy and Finance has eased problems related to information exchange and coordination of activities. Although some difficulties remain, this consolidation has reduced the complexity of the funding landscape. In contrast, Finland's single institution, Business Finland, is responsible for implementing a range of policies related to development and managing both EU and national funding. This integrated approach has several benefits, including realizing synergies and a more effective use of resources, simplifying the funding landscape, and reducing the complexity and administrative burden on regional and local authorities. The case studies also highlight the severe and long-lasting consequences of industrial decline on regional economies.
    - The demise of Nokia in Finland serves as a prime example of how the collapse of a dominant industry can have a profound and enduring impact on a region's economy. Similarly, the experiences of old coal mining and iron and steel regions, such as the Ruhr Gebiet in Germany and the Hainaut region in Belgium, demonstrate the protracted nature of restructuring and recovery. , These examples underscore the risks associated with a region's over-reliance on a single company or industry for income and jobs . Even if the industry appears strong and resilient, its decline or relocation can have devastating consequences for the local economy. The sudden loss of a major employer can lead to widespread job losses, reduced economic activity, and a decline in regional competitiveness.
- The case studies hence emphasise the importance of having support measures in place to facilitate the restructuring process. In the aftermath of a major industry's decline or relocation, regions may require sustained support over many years to stimulate new economic growth, attract new investments, and retrain the workforce. This highlights the need for

policymakers to develop and implement comprehensive strategies that can help mitigate the negative impacts of industrial decline and foster a more diversified and resilient regional economy. The case studies demonstrate that less developed regions require support not only to mitigate the adverse effects of challenges, but also to capitalise on the opportunities presented by challenges and transitions, particularly in the context of the green transition.

- These regions are well-positioned to develop renewable energy sources due to their climate or location, and with financial support, can drive socio-economic development and create an ecosystem for new activities that utilise generated renewable energy, further developing necessary services, facilities, expertise, and labour force skills.
- However, there is a risk that benefits from renewable energy production may not remain in the region where it is produced, unless explicit policies are in place to ensure lasting benefits. The example of the Groningen region in the Netherlands, which hosted the largest natural gas field in Europe ([32]) but saw little of the income generated remain in the region, highlights the importance of retaining local profits.
- The green transition has therefore the potential to either reduce or exacerbate regional inequalities, depending on how it is implemented. It could create new job opportunities for instance in rural areas with high potential for renewable energy development, such as wind and solar power, and carbon capture and storage in natural ecosystems, as it can pose challenges for employment and households in low-income rural areas. At the same time, evidence suggests that the green transition may also favour more developed regions, attracting investment and skilled workers.
- To address these challenges, a territorial approach to implementing the green transition is necessary, prioritising equity and minimising harm. This can be achieved by supporting vulnerable regions through co-financing investments in renewable energy, energy efficiency, clean and circular technologies, and the corresponding infrastructure. Additionally, retraining and education programmes should be implemented to help workers adapt to the changing job market and develop the necessary skills for green jobs.
- It is crucial to prioritise social equity and provide support for workers affected by the transition, as well as low-income households, to

([32]) The gas field supplied many parts of the EU until extraction ended in 2023. The closure was not because of the gas running out but because of the seismic risks to the area if extraction had continued.

mitigate the burden of increased energy costs and prevent heightened risks of energy poverty. As the green transition unfolds, minimising its impact on energy costs is vital to ensure that all regions can benefit from the transition to a climate-neutral economy.

5. Policy implications

The preceding chapters have highlighted a multitude of policy issues, challenges, responses, and strategies pertinent to Cohesion Policy. The subsequent section aims to consolidate these findings, providing a detailed examination of the implications for Cohesion Policy. These issues encompass not only concerns related to the scale of funding and its regional allocation but also the management and implementation of the policy, including its interplay with other EU and national funding sources. Although these challenges are not novel, their relevance is underscored by the model projections and case studies, which have considered the multiple effects of the three selected key challenges ahead.

Before proceeding, it is essential to establish two key points regarding the scope of the following analysis and the inherent nature of Cohesion Policy.

5.1. Scope of Cohesion Policy and its relationship with other policies

A notable trend in the evolution of Cohesion Policy has been its increasing utilisation as a financing instrument for various EU policy initiatives. While its core objective of reducing regional disparities and supporting regions in overcoming socio-economic development obstacles has remained steadfast, Cohesion Policy has been progressively tasked with providing financial backing for broader EU policy objectives. In recent years, this has included supporting Member States in implementing the Europe 2020 strategy. Currently, Cohesion Policy plays a key role in facilitating the achievement of smart, sustainable, and inclusive growth goals, underscoring its adaptability and responsiveness to changing EU priorities.

More recently, in response to the unprecedented crises facing the European Union, including the COVID-19 pandemic, the ongoing war in Ukraine, the energy crisis, and devastating natural disasters such as floods, the scope of Cohesion Policy has been expanded to explicitly include crisis response and recovery as a key objective, recognising the critical role that regional development policy can play in supporting affected communities and mitigating the impact of crises. This marks even further the broadening of the policy's focus, from solely promoting long-term economic, social, and territorial convergence to also addressing immediate crisis response and recovery needs.

Regarding the policy’s role in driving progress on several key EU priorities, the policy plays a pivotal role in supporting regions in the implementation of smart specialisation strategies, which aim to boost innovation and economic growth. Furthermore, Cohesion Policy contributes to the achievement of the EU's climate and energy targets, while also providing critical support for the digital and green transitions. To this end, Member States are required to concentrate a significant

share of their funds on a limited number of thematic objectives, in line with the policy rules on thematic concentration, with the exact share varying depending on the category of region.([33])

The introduction of EU-wide priorities and obligations may conflict with Cohesion Policy's core objective of supporting regional development, particularly if regional priorities are overshadowed by EU-level strategies. Regions face diverse challenges and have unique development priorities, shaped by their distinct contexts. However, the imposition of EU-level objectives may force regions to allocate funds in ways that do not align with their own priorities, leading to unsatisfactory use of funding and undermining the principles of place-based policy.

Furthermore, the imposition of EU-level ambitious objectives, combined with insufficient funding, as compared to the needs, for key priorities like the green transition, creates a complex challenge. With limited resources, regions may struggle to balance competing demands, potentially leading to suboptimal outcomes for both regional development and EU objectives.

In this context, it becomes increasingly evident that the scale of financing required to complete the green transition and achieve climate neutrality by 2050 is substantial, far exceeding the resources available to many regions. In particular, less developed regions face a significant financing gap, as the costs of transition are disproportionately high relative to their economic capacity. While transition and even more developed regions may also face challenges in financing the green transition, the issue is most acute for less developed regions. For the future, using a substantial share of EU Cohesion Policy funding to support the green transition would likely leave insufficient resources for other critical development objectives and priorities, unless the overall allocation is substantially increased. This highlights the need for a comprehensive approach to policy development and financing the green transition, involving multiple funding EU and national sources and instruments, as well as increased coordination with other sectoral policies and strengthened public-private partnerships.

At the same time, in recent years, new funding sources have been established to support Member States in meeting the costs associated with the green transition. Notably, the Just Transition Fund (JTF) has been introduced with a budget of EUR 19.7 billion from EU sources for the period 2021-2027, aiming to mitigate the effects of the transition in regions heavily reliant on coal and carbon-intensive industries. Furthermore, the Social Climate Fund (SCF) is expected to mobilise at least EUR 86.7 billion for the period 2026-2032, primarily to alleviate the social

([33]) Forging a sustainable future together: Cohesion for a competitive and inclusive Europe : Report of the High-Level Group on the Future of Cohesion Policy, February 2024, Forging a sustainable future together - Publications Office of the EU

impact of the new emissions trading scheme on vulnerable households, micro-enterprises, and transport users.

As the green transition progresses, it is likely that these funding sources will need to be scaled up to address the mounting costs of investments and reforms and responding to social consequences. However, the introduction of these new funds raises questions about their relationship with the European Regional Development Fund (ERDF) and the coherence of pursuing long-term pan-European objectives, such as achieving net-zero carbon emissions by 2050 and reducing regional disparities in development.

Moreover, the management and implementation of these funds pose additional challenges. As macroeconomic model simulations have shown, in Chapter 3, the impact of the green transition is not necessarily correlated with the level of development of regions, which implies that the traditional Cohesion Policy classification of regions cannot be the sole criterion for eligibility for support. Instead, a more nuanced approach is required, taking into account the specific needs and challenges of each region.

This highlights a broader point: the implications of the green transition for Cohesion Policy cannot be considered in isolation from other policies aimed at addressing this challenge, as well as the challenges posed by globalisation. A comprehensive and coordinated approach is necessary to ensure that EU policies work together to achieve their objectives, including reducing regional disparities and promoting sustainable development. ([34])

Ultimately, the allocation of funding must strike a balance between supporting regions most affected by the transition and considering the capacities these regions have in using funding to tackle multiple challenges and capitalise on their opportunities. This requires a more integrated and flexible approach to policy design and implementation, one that takes into account the complex interplay between different EU policies and the diverse needs and capacities of regions across the continent.

5.1.1. Place-based versus sectoral policies

The key difference between Cohesion Policy and sectoral policies is that Cohesion Policy is place-based, tailored to the specific needs and characteristics of regions, while sectoral policies (like research and innovation) tend to be spatially blind and often prioritise locations with the highest expected returns. This approach has less impact on less developed regions and can exacerbate regional disparities, as these regions are often less attractive for investments and activities due to their limited resources and capabilities. This self-reinforcing cycle can

([34]) 9th Cohesion Report and related Communication.

perpetuate regional inequalities, making it increasingly challenging for less developed regions to catch up with their more developed counterparts.

To address these disparities, the EU has emphasised the importance of a balanced approach in its recent strategic publications, reports, and political guidelines.([35]) By supporting long-lasting reforms and investments that contribute to strengthening European growth, the EU aims to create an environment where efficiency and equity coexist. By leveraging both sectoral and place-based policies, the EU can harness the strengths of each approach to drive regional development, reduce disparities, and promote convergence among its Member States.

At the same time, current model simulations suggest that more developed regions may gain advantages and widen regional disparities in the short term. Indeed, these regions are often better equipped to host new joint ventures in key sectors, thereby strengthening EU industrial competitiveness. Nevertheless, less developed regions have the potential to undergo transformative changes in the longer term, developing the structural features necessary to become attractive investment destinations, such as modern infrastructure, innovation capacity, and a highly educated and skilled workforce. This is the more important, as unlocking the economic potential of the less developed regions might be a necessary ingredient to close the gap in productivity growth to major economies the EU encountered over the last two decades.([36]) For example, coordinating place-based with sectoral policies, in particular with reference to the EU Start-up and Scale-up Strategy (to be expected in the second quarter of 2025) not only supports closing the innovation gaps between the EU regions, but, from a global perspective, also the innovation gap between the EU and global technology leaders in critical sectors such as the US. Similar holds for the development of new growth engines such as the bio-economy, bio-tech or advanced materials, where the exploitation of synergies between place-based and sectoral policies, not only boost EU global competitiveness ([37]) but also contributes to reducing economic disparities between the more and the less developed regions.

While these potential developments cannot be easily captured by macroeconomic models based on current and past trends, they hold significant promise for the future. Therefore, to unlock this potential, it is essential to adopt a more nuanced and forward-looking approach, recognising the potential for less

([35]) Forging a sustainable future together: Cohesion for a competitive and inclusive Europe : Report of the High-Level Group on the Future of Cohesion Policy, February 2024, Forging a sustainable future together - Publications Office of the EU

([36]) A Competitiveness Compass for the EU: Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions, COM(2025) 30 final, p.4.

([37]) A Competitiveness Compass for the EU: Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions, COM(2025) 30 final, p.6.

developed regions to undergo transformative change and emerge as key contributors to EU growth and competitiveness. This requires a fundamental shift in perspective, acknowledging that all regions possess inherent potential for growth and development.([38])

Conversely, sectoral policies must explicitly consider the territorial implications of their investments. As highlighted in the Letta report on the Single Market ([39]), EU Cohesion Policy alone is insufficient to reverse the challenges faced by less developed areas. National-level policies and EU-level sectoral policies, which often prioritise concentration of economic activity in major urban centres, must also be adapted to address regional disparities, underscoring the need for a more nuanced and territorially aware policy framework.

Ultimately, a more integrated and coordinated policy and funding framework that combines the strengths of both cohesion, and sectoral policies is necessary. By promoting more balanced and inclusive growth, this integrated approach can help address regional disparities and support the development of all regions, regardless of their level of economic advancement.

5.2. General implications for Cohesion Policy

5.2.1. Scale of funding

A key takeaway from both the model simulations and case studies is that the need for Cohesion Policy type of funding is likely to intensify in the coming years, rather than diminish. According to model projections, the combined impact of the three challenges will exacerbate regional disparities, as GDP per capita growth in more developed regions is expected to outpace that of less developed regions in most scenarios.

This underscores the crucial role of Cohesion Policy as a primary source of funding for measures addressing regional disparities. The case studies highlight the importance of this funding, particularly in less developed and transition regions, where Cohesion Policy is often the primary source of support. With the EU pursuing closer integration and the development of EU-wide sectoral policies, the need for Cohesion Policy to address regional disparities will only grow. This

([38]) Forging a sustainable future together: Cohesion for a competitive and inclusive Europe : Report of the High-Level Group on the Future of Cohesion Policy, February 2024, Forging a sustainable future together - Publications Office of the EU

([39]) Forging a sustainable future together: Cohesion for a competitive and inclusive Europe : Report of the High-Level Group on the Future of Cohesion Policy, February 2024, Forging a sustainable future together - Publications Office of the EU

is particularly relevant in the context of the six key areas of industrial policy identified by the Commission as crucial to the green and digital transition. ([40])

In essence, the more integrated EU economies become, the greater the need for cohesion policy to address regional disparities. This rationale is consistent with the policy's origins, which date back to the creation of the Single Market. This logic remains relevant today, as model projections indicate that closer cooperation will drive overall growth in the EU, particularly in more developed regions. As the EU continues to integrate, it is essential to maintain a strong cohesion policy to ensure that the benefits of integration are shared equitably across all regions, and that less developed regions are not left behind.

5.2.2. Allocation of funding between regions

Contrary to the vulnerability analysis, which reveals a strong inverse relationship between regional vulnerability to the three challenges and their categorisation under Cohesion Policy, as well as their GDP per head, the model simulations yield a different outcome. While the simulations suggest that the challenges tend to exacerbate regional disparities on average, the effects are only weakly correlated with regional GDP per head and, by extension, the related categories of regions under Cohesion Policy.

This discrepancy has significant implications for the allocation of support. If the primary responsibility for addressing the challenges falls to Cohesion Policy, many regions that are projected to be severely impacted will not receive adequate support. In reality, financial assistance will be limited and concentrated in less developed regions and, to a lesser extent, transition regions. Specifically, transition regions can expect to receive more support than more developed regions, although still significantly less than less developed regions.

To address the mismatch between regions most affected by the three transitions and the allocation of Cohesion Policy funds, two options are available. The first involves revising the classification criteria for regions eligible for Cohesion Policy funding to include additional factors beyond GDP per capita, such as their capacity to respond to globalisation, adapt to the green transition, or address demographic challenges. This approach would revive the pre-2007 system of identifying areas experiencing significant economic difficulties, but it also raises challenges, including defining the criteria for delineating the affected areas.

Alternatively, new funds could be established, or existing ones more targeted to the regions most impacted by the transitions. While this approach can be effective, it poses new challenges, such as coordinating the management and

([40]) Forging a sustainable future together: Cohesion for a competitive and inclusive Europe : Report of the High-Level Group on the Future of Cohesion Policy, February 2024, Forging a sustainable future together - Publications Office of the EU

implementation of the funds with Cohesion Policy, minimising administrative costs, and avoiding overlaps in project support.

Given the significant shortcomings of both options, it is essential to carefully consider how to introduce targeted measures of support or funding instruments to effectively address the three challenges outlined in this report. The Just Transition Fund serves as a relevant example of targeted support for regions below NUTS 2 level that are heavily impacted by the green transition. In principle, this could be a valuable model for targeted EU funding, as discussed in the previous section. Nevertheless, the lack of a uniform governance and management model poses potential coordination challenges with other Cohesion Policy funding instruments, as well as difficulties in evaluating the impact of funded projects. This is particularly problematic when the areas receiving funding under the JTF do not align with traditional Cohesion Policy statistical NUTS 2 regions, resulting in a likely scarcity of available data for monitoring and evaluation purposes. .

. A further point to come out of the case studies and model projections is the importance of considering the timescale for funding in Cohesion Policy. The experience of coal and steel regions in the past and some of the case study regions highlights that restructuring can be a decades-long process, particularly when it involves transitioning away from major industries. This process requires sustained support over a long period, making it challenging to achieve rapid results.

Fortunately, Cohesion Policy is well-suited to provide the necessary long-term funding, with its 7-year programming periods and the possibility of extending projects over multiple periods. This allows for a more stable and consistent funding environment, which is essential for supporting complex and time-consuming restructuring efforts. In contrast, national funding sources are often more vulnerable to fluctuations in political sentiment and support, making them less reliable for long-term projects.

However, critics of Cohesion Policy often overlook the long-term nature of the restructuring process, expecting to see tangible results over a shorter period. This unrealistic expectation ignores the complexity and duration of the restructuring process, which can take decades to complete. By recognising the importance of long-term funding and support, policymakers can better design and implement Cohesion Policy initiatives that effectively address the needs of regions undergoing significant economic transformations.

5.2.3. Composition of programmes

The support provided by Cohesion Policy also needs to be based on a coherent long-term strategy that outlines a clear development path and a viable financing plan. The case studies reveal that many long-term plans in place in the covered

countries and regions fall short of this expectation. These plans often focus on specific policy areas or objectives, such as digitalisation or reducing carbon emissions, without being integrated into an broader strategy. It is the responsibility of the authorities managing Cohesion Policy in both Member States and the EU to ensure that funding is invested in projects that are part of a well-defined programme, clearly outlining the steps to achieve the ultimate goal of restructuring the economy and ensuring effective use of funds.

Furthermore, while the model projections primarily examined the effects of individual challenges, the case studies demonstrate that these challenges are deeply interconnected. Consequently, policy responses and funding allocations must take this interdependence into account. Ideally, the development of new products and processes in response to globalisation should also support the green transition or, at the very least, be consistent with it. The development of electric cars in Germany serves as a prime example of this approach, where innovation and sustainability go hand-in-hand. By adopting a holistic approach, Cohesion Policy can maximise its impact and drive meaningful economic transformation.

A comprehensive response to the challenges facing regions is necessary, one that transcends individual policy areas and instead adopts a multifaceted approach. As Cohesion Policy aims to provide tailored solutions to regional and local challenges, it must address the interconnected needs of each region. For instance, responding to globalisation requires a broad-based strategy that goes beyond supporting R&D, innovation, ICT, and business enterprises. It must also include investments in infrastructure, education, and training, creating an attractive environment for businesses to thrive and people to stay and live. Similarly, supporting the green transition necessitates a holistic approach, where emission targets are achieved through a combination of investments in renewables, energy efficiency, and other sectors. Likewise, addressing the demographic challenge demands a comprehensive strategy, considering its far-reaching implications for businesses, employment, healthcare, and social welfare. By adopting a cohesive and integrated approach, EU funding and Cohesion Policy can effectively support regions in overcoming their unique challenges and achieving sustainable growth.

5.3. More specific policy implications

5.3.1. The green transition

The green transition has significant implications for Cohesion Policy, with both general and specific requirements. The overarching goal is to support regions in reducing their carbon emissions through various means. Two specific implications arise from this goal. Firstly, regions heavily reliant on fossil fuel

extraction will need assistance to restructure their economies and develop new activities, mitigating the impact of transitioning away from fossil fuels. Secondly, less developed regions will require support to develop renewable energy sources and create new economic opportunities that utilise this energy, thereby driving growth and development.

In regions transitioning away from fossil fuel extraction, a key challenge is to support workers who lose their jobs and help them find new employment opportunities. This requires developing new activities and creating new jobs to replace those lost. The case studies demonstrate the magnitude of this transition and the difficulties in overcoming resistance to change, as well as the need to shift attitudes and behaviours. The reluctance of some countries, such as Poland, to commit to achieving zero carbon emissions by 2050, and the widespread opposition to emission charges, illustrate the scale of these challenges. To address these concerns, compensating individuals who are disadvantaged by the transition and alleviating energy poverty through targeted financial support, rather than subsidising energy use or keeping prices artificially low, can be effective means of driving the necessary changes.

The model projections for less developed regions yield vastly different results depending on the assumptions made about their ability to capitalise on their potential advantage in developing renewable energy sources and creating new economic opportunities. It is evident that more developed regions possess a stronger capacity to develop new areas of activity and seize the opportunities presented by the green transition. In many cases, this involves importing energy from less developed regions with favourable climatic conditions for renewable energy expansion. However, although this can generate income for the energy-producing regions, the benefits are likely to be short-lived, limited to the construction period of energy-generating plants. Moreover, most of the equipment required may come from more developed regions, leaving limited gains for the producers.

The implication is that Cohesion Policy support is necessary to assist less developed regions not only to construct the required energy-generating plants but also to develop new activities based on renewable energy sources. As highlighted in the case studies, these activities will only materialise if support is provided to increase the attractiveness of the regions for investment from outside and create the conditions that encourage firms to set up production facilities. This, in practice, means establishing the necessary infrastructure (transport and communication networks, research facilities), services (education, health, social care) and amenities (cultural, sports, leisure) to attract both businesses and skilled workers. Furthermore, it means that the green transition will also lead to significant changes in skill requirements, with the emergence of new occupations and changes in skill needs in existing ones. To address this, policymakers must invest in skills policies that help businesses and workers adapt to the changing job market. By further integrating reskilling, upskilling, and education into the

Cohesion Policy, policymakers can support the green transition and other parallel transitions affecting the job market and create a more sustainable and prosperous future for all.

The estimated scale of investment required to achieve the green transition goals is substantial, especially in the fossil fuel extraction regions,. As mentioned earlier, there is a question about the extent to which the funding available under Cohesion Policy, even with significant expansions, can provide the necessary support to less developed regions. in. This raises further questions about the allocation of support between Cohesion Policy and a separate fund for addressing green transition challenges, which exposes potential issues related to the coordination of management and operation of the two funding sources. These issues are explored in more detail below.

5.3.2. The demographic challenge

The model projections highlighted a crucial issue related to the movement of people between regions, which was also a major concern that emerged from the case studies. Specifically, the issue revolves around the impact of population outflows and inflows on a region's growth prospects. It is clear that the effect of migration on regional growth depends significantly on the characteristics of the individuals involved, particularly their age and skill set.

In several case studies, there was a pressing concern about the regional impact of young, educated, and skilled individuals leaving less prosperous and often rural regions to move to major economic hubs. These people leave behind a population with an unbalanced age structure and a workforce lacking essential skills, which in turn makes these regions less attractive to businesses. As a result, the region's growth prospects are diminished. Conversely, there were also concerns raised about the increasing difficulty of attracting workers from outside in regions that are not major economic centres, suggesting that such inflows are vital for driving growth.

The primary concern for Cohesion Policy is how to help regions stem the outflow of population, especially of young workers and ensure that that young, educated, and skilled individuals ‘have an effective right to stay in the place they call home’.as outlined in Ursula von der Leyen’s Political Guidelines for the next European Commission 2024-2029 ([41]) put forward worked ‘This issue is closely linked to the challenge of supporting less developed regions in developing activities based on renewable energy. Until now, the focus of Cohesion Policy has been on enhancing the attractiveness of regions to businesses and people through investments in infrastructure and facilities. This approach is rooted in the

([41]) Forging a sustainable future together: Cohesion for a competitive and inclusive Europe : Report of the High-Level Group on the Future of Cohesion Policy, February 2024, Forging a sustainable future together - Publications Office of the EU

place-based nature of Cohesion Policy, which assumes that each region can identify a path to development.

At the same time, as highlighted by some of the case studies, the experience of some peripheral and highly rural regions in Bulgaria and Poland, where depopulation is a pressing concern, is challenging this assumption. In these areas, it may be necessary to acknowledge that, beyond a certain point, the focus of Cohesion Policy should shift towards an explicit policy of non-development.([42]) Instead of attempting to engineer development, these regions could focus on supporting activities that maintain the area's natural state, such as sustainable land and forest management, to preserve the countryside's attractiveness for visitors. This approach would require a fundamental shift in the policy's objectives, prioritising the preservation of rural areas over economic development.

5.3.3. Intra-regional disparities

Depopulation is likely to have a more significant impact on areas within NUTS-2 regions rather than the entire NUTS-2 region as a whole. The case studies highlighted the growing disparities within NUTS-2 regions, primarily between main urban areas and their less urbanised neighbouring regions. According to interviewees and focus group participants, there is a declining trend in growth in main urban areas spilling over to peripheral areas. This shift may be a result of changing economic activity patterns in urban areas.

This raises a question about the focus of Cohesion Policy: should it prioritise disparities within NUTS-2 regions as much as differences between them? NUTS-2 regions are largely statistical constructs that may not align with administrative entities or functional areas, which are arguably the most relevant targets for development strategies. Considering a NUTS-3 focus might partially capture these differences, but it is unlikely to provide a complete solution, as NUTS-3 regions also tend to mismatch functional areas. This highlights the need for a more nuanced approach to addressing regional disparities, one that takes into account the specific needs and characteristics of functional areas rather than relying solely on statistical constructs.

However, to effectively implement and evaluate Cohesion Policy, a clearly defined territorial unit is necessary, along with access to relevant statistical data.

([42]) Forging a sustainable future together: Cohesion for a competitive and inclusive Europe : Report of the High-Level Group on the Future of Cohesion Policy, February 2024, Forging a sustainable future together - Publications Office of the EU

This allows for the tracking of developments and assessment of policy performance.([43])

The appropriate definition of regions for Cohesion Policy purposes remains an ongoing issue that warrants further consideration. It cannot be assumed that the current practice of focussing on NUTS-2 regions, convenient as it might be, is the most appropriate way of defining and measuring regional disparities, and promoting balanced regional development.([44]) As noted in the recent High Level Group report on the Future of Cohesion Policy, the current practice is '*narrow and limited*' and 'res*tricts the capacity of the EU to consider development from a systemic perspective, hence reducing the returns of the policy.*'([45]) A more nuanced approach to defining regions and measuring disparities is necessary to optimise the impact of Cohesion Policy.

In this regard, the relationship between large urban centres and their surrounding areas is a critical aspect to consider in the context of Cohesion Policy. The evidence collected from case studies suggests that this relationship has deteriorated. The once-prominent spillover effects, where economic activity in urban centres benefited surrounding areas, are no longer as pronounced.

This breakdown has significant implications, as surrounding areas no longer reap the benefits of economic activity concentrated in neighbouring centres. The reasons for this decline are multifaceted, potentially stemming from changes in economic activity or the increasing focus on trade relations between urban centres, as highlighted by the High-Level Group on the Future of Cohesion Policy.([46])

To address this issue, Cohesion Policy must take into account the lack of spillover effects when supporting investment. This could involve:

- Direct investment: Ensuring that investment is channelled directly into the surrounding areas concerned.
- Strategic investment: Financing investments in urban centres that are likely to generate beneficial spillover effects in surrounding areas.

([43]) Forging a sustainable future together: Cohesion for a competitive and inclusive Europe : Report of the High-Level Group on the Future of Cohesion Policy, February 2024, Forging a sustainable future together - Publications Office of the EU

([44]) Forging a sustainable future together: Cohesion for a competitive and inclusive Europe : Report of the High-Level Group on the Future of Cohesion Policy, February 2024, Forging a sustainable future together - Publications Office of the EU

([45]) Forging a sustainable future together: Cohesion for a competitive and inclusive Europe : Report of the High-Level Group on the Future of Cohesion Policy, February 2024, Forging a sustainable future together - Publications Office of the EU

([46]) Forging a sustainable future together: Cohesion for a competitive and inclusive Europe : Report of the High-Level Group on the Future of Cohesion Policy, February 2024, Forging a sustainable future together - Publications Office of the EU

Moreover, Cohesion Policy should not be limited to areas with the most acute problems. The past experience with Objective 2 areas during the 2000-2006 period demonstrates the limitations of this approach. By restricting investment to the most affected areas, the benefits of investment were often diminished.

A more effective approach would be to consider the broader regional context and invest in areas where the benefits can be maximised. This might involve investing in surrounding areas or urban centres that can stimulate economic growth and create positive spillover effects.

By adopting a more nuanced and flexible approach, Cohesion Policy can better address the complex relationships between urban centres and their surrounding areas, ultimately promoting more balanced and sustainable regional development.

5.4. Implementation issues

5.4.1. Lack of capacity

While model simulations provide valuable insights into the impact of Cohesion Policy, they do not address the critical issues surrounding its implementation. The case studies commonly indicated several concerns related to policy management and procedures, which are equally important to consider.

One of the most significant challenges is the capacity of local authorities to develop and execute effective programmes that address regional challenges. This is particularly problematic for smaller authorities, which often lack the necessary expertise and are under pressure to comply with the cohesion policy N+3 spending rule. As a result, they tend to opt for simpler, more straightforward projects, rather than more complex initiatives that could have a greater impact on reducing carbon emissions or strengthening the local economy.

To address these challenges, it is essential to:

- Build capacity: Provide authorities with the necessary expertise and resources to develop and execute effective programmes and projects.
- Streamline procedures: Simplify the procedures surrounding Cohesion Policy to reduce the administrative burden on local authorities and allow them to focus on more complex projects.
- Encourage innovation: Incentivise local authorities to pursue more innovative and effective solutions, even if they are more complex, to drive meaningful change in their regions.

The clear implication for Cohesion Policy is to provide the necessary support to help authorities devise a strategy for tackling development issues. Regional and local officials involved and interviewed in the case studies emphasised that the provision of technical such support was as important as the amount of funding received. Both forms of support are necessary in responding to the challenges, especially those posed by the green and digital transition.

5.4.2. Need for harmonisation between funds

In recent years, new funding sources have been established to address emerging issues, such as the COVID-19 pandemic and the green transition. While these funds supplement Cohesion Policy financing, they introduce a new set of challenges. The case studies highlighted that the procedures and regulations governing these new funds differ from those of Cohesion Policy, creating administrative complexities.

A prime example is the Recovery and Resilience Facility , which was set up under NextGenerationEU (NGEU) in 2021 to support Member States in recovering from the pandemic and strengthening their resilience against future crises. Although the RRF targets similar policy areas and objectives as Cohesion Policy, it operates under distinct procedures and regulations.].

According to most of the interviewees from the case studies, when Cohesion Policy funds and RRF are managed by different authorities, the risk of overlap or conflict between measures funded by the RRF and Cohesion Policy increases. Similar concerns were voiced with regard to the Just Transition Fund and Social Climate Fund.

While having the same authority manage the Cohesion Policy funds and the RRF can reduce the risk of overlap, it also introduces a significant administrative burden. This workload increase is often not accompanied by additional resources, leading to bottlenecks in implementing programmes and delays in spending available funding.

The case studies highlighted that this issue is particularly pronounced in the current programming period. To address this challenge, it is essential to streamline procedures and minimise administrative costs. A key takeaway from the case studies is that funds operating in the same policy areas should have unified procedures, rules, and a common operating framework. This approach would help to maximise the impact of policy interventions and ensure that available funding is utilised efficiently.

The procedures concerned also need to be as simple as possible. Despite the efforts made by the Commission towards simplification, officials responsible for managing Cohesion Policy on the ground regard it as being overly complex. Officials interviewed from Managing Authorities in Member States, such as

Austria, where the amount of funding received under Cohesion Policy is very small, reported that the funds are spent on simple projects with marginal effects in order to keep down administrative costs and the use of personnel. This pattern is observed in multiple Member States.

At the same time, the complexity of administrative arrangements in place is often attributed to actions or inactions at the Member State level. National regulations can sometimes lead to over-elaboration of accounting procedures, making it even more challenging to manage EU funds. This can be due to a tendency to add extra steps or documentation, which can lead to increased administrative burdens and complexity. Additionally, Member States may be hesitant to simplify procedures due to the effort involved or the risk that the simplified method may not be accepted by the Commission. This cautious approach can result in more complex procedures, ultimately hindering the effective management of EU funds.

5.4.3. Relationship with national policies

The case studies reveal that nearly all Member States have long-term plans to address the three challenges, but these plans often lack coherence and coordination. Cohesion Policy should support these plans by financing programmes or co-financing projects that complement them. However, this is not always the case, highlighting the need for harmonisation between sectoral policies and Cohesion Policy. Furthermore, the implementation of policies at the regional level is heavily influenced by the national context, including economic conditions, public finances, social cohesion, political stability, fiscal and monetary management, education, social welfare, and migration. Therefore, it is essential to adopt a holistic, strategic approach when designing and implementing policies, considering the national and subnational context rather than focusing solely on the specific measures which are directly aimed at, such as reducing carbon emissions or incentivising firms to invest in digitalisation. This is especially important since, as emphasised above, the success of the green transition, in particular, depends on changing attitudes and behaviour of businesses and people, so that they accept the measures taken to reduce carbon emissions and the costs that they may need to bear to achieve this. Whether the policies implemented are effective in furthering the green transition, strengthening competitiveness, and responding to demographic trends, depends as much on the national context as on the design of the policies themselves. This needs to be clearly understood when assessing Cohesion Policy both ex ante and ex post.

5.5. Concluding points

The comprehensive vulnerability analysis, modelling, and case studies presented in this study collectively yield a set of key conclusions and potential recommendations for the future of EU funding and Cohesion Policy. By

integrating these diverse perspectives, this research provides a nuanced understanding of the complex issues at play, ultimately informing a more targeted and effective approach to promoting regional development, resilience, and cohesion within the EU.

Future Cohesion Policy Reform: Addressing Emerging Challenges

The results of the analysis suggest that globalisation - provided that there will be no major disruptions in global trade - and technological change tend to benefit the more developed regions more than the less developed and, thus, likely tend to increase disparities. Also, the vulnerability and the case study analysis indicated that the sources of these differences in global competitiveness and innovation potential across regions tend to be rooted in a wide array of areas such as infrastructure and facilities, the skills of the workforce, the sectoral structure, the administrative capacity etc. that all tend to be weaker in the less developed regions. Nevertheless, those regions have the potential to undergo transformative changes in the longer term, developing the structural features necessary to become competitive, innovative and attractive investment destinations.

Yet unlocking this potential requires a fundamental shift in perspective, acknowledging that respective policy approaches need to be holistic by, on the one hand, considering the specific development needs of the regions as well as the interdependencies between them, and on the other hand, combining and coordinating place-based and sectoral policies to an integrated approach to support development of all regions, regardless of their level of economic prosperity. And, unlocking the potential also requires acknowledging the long-term nature of this process and the timescale for policy support, as such fundamental economic changes in the regions may take decades to accomplish. Cohesion Policy, with its 7-year programming periods and the possibility of extending projects over more than one period, is well set up to provide the holistic policy framework and the long-term funding needed.

Referring to the demographic transition, depopulation is a significant challenge faced by many regions across the EU. **While Cohesion Policy can provide support to these regions to tackle the demographic transition and ensure "all citizens have an effective right to stay in the place they call home"** ([47])**, case studies showed that there are certain regions, particularly, peripheral ones, that do not fully benefit** from the policy's ability to stem the outflow of people and stimulate development. In some cases, it may be necessary to consider alternative approaches, such as deliberate non-economic development, to ensure the long-term sustainability of these regions. This emphasises further the need for a **strategic coordinated European, national, and subnational**

[47] Political Guidelines For The Next European Commission 2024−2029

development strategy, combining diverse approaches to regional development, based on an analysis of territorial challenges and opportunities.

The green transition requires significant investment in renewable energy, energy efficiency, and sustainable infrastructure. However, the cost of this transition can be prohibitively expensive for some regions, particularly those that are heavily reliant on fossil fuels. **While Cohesion Policy cannot cover all the funding needs of the green transition, it can play nevertheless a crucial role in supporting Member States and regions in overcoming these challenges and ensuring a just transition**. For instance, through targeted investments, Cohesion Policy can help less developed regions in constructing the required energy-generating plants and developing new activities and industries based on renewable energy sources. Additionally, Cohesion Policy can support the significant upskilling and reskilling required for a low-carbon economy, enabling businesses and workers to adapt to the changing job market.

Moreover, achieving a net-zero future by 2050 requires a societal consensus on the need for climate action. **Cohesion Policy can contribute to building this consensus by promoting fair and equitable distribution of the costs and benefits of the transition**. By providing fair compensation to those most affected, Cohesion Policy can help alleviate concerns and ensure a smoother transition. Ultimately, this support is crucial for persuading people and businesses to change their behaviour and accept the implications of a low-carbon future.

Shaping the Future of Cohesion Policy: Potential Key Reform Directions

Strengthened, more effective funding: One of the main implications for Cohesion Policy is that meeting the three challenges is likely to require an expansion of funding, especially if there is closer economic integration in the EU. The study's findings suggest that the current funding level may not be sufficient to effectively address the challenges posed by the green transition, digitalisation, and demographic change. An increase of funding would enable Cohesion Policy to provide more substantial support to regions and cities, helping them to invest in sustainable infrastructure, promote innovation, and develop the skills and competences needed for the future. At the same time, in a context of budgetary constraints and emerging challenges and needs, Cohesion Policy will need to adapt and continue to deliver where it matters the most.

Exploring more nuanced and targeted approaches to regional development and enhancing flexibility and adaptability to address diverse regional needs: The model projections show that the effects of the challenges on regions do not neatly correspond to the GDP per head criterion, or the way that regions are classified for Cohesion Policy purposes, suggesting that this may need to be modified. The case studies findings highlight the need for a more nuanced, dynamic approach to regional development, one that takes into account the specific challenges and opportunities faced by different regions. This may involve

therefore modifying the current categorisation of regions or rendering the EU funding more targeted and flexible as to effectively tackle these diverse territorial challenges.

Cohesion as an EU objective: Reducing regional disparities across the EU cannot be left to Cohesion Policy alone, and sectoral policies at both the EU, and national level should not be spatially blind but should take explicit account of their territorial impact.

Coordinated, strategic approach to development: Cohesion Policy must be better coordinated with national development policies to ensure a comprehensive approach to regional development. This includes aligning Cohesion Policy with long-term plans for reducing carbon emissions, promoting digitalisation, and addressing demographic change.

Streamlined, harmonised rules: To effectively support regions in addressing the complex challenges they face, a single, harmonised rule book is essential. It is crucial that any future specific funds established to help regions tackle these challenges adhere to a coherent approach, with the same procedures and regulations as Cohesion Policy. This will prevent the creation of an additional administrative burden for authorities, ensuring that resources are allocated efficiently and effectively. A unified framework will facilitate a streamlined and consistent implementation of EU policies, ultimately enhancing the impact of regional development efforts.

Reorienting the policy to tackle growing intra-regional disparities and rethinking the NUTS2 level as the primary territorial scope: The increasing trend of intra-regional disparities across the EU underscores the need for a fundamental reassessment of Cohesion Policy. As disparities within regions continue to grow, it is essential to re-examine the policy's focus and territorial scope. The current approach, centred on NUTS-2 regions, may no longer be sufficient to address the complexities of regional development. Intra-regional disparities demand a more nuanced and targeted approach, one that acknowledges the diverse needs and challenges within regions. By rethinking Cohesion Policy, the EU can better equip itself to tackle these disparities, promoting more balanced and equitable regional development. This may involve strengthening the policy's focus on sub-regional or local levels, allowing for more tailored interventions and a more effective reduction of intra-regional disparities.

Strengthen capacity and the policy's ability to respond to emerging challenges and opportunities: The case studies highlighted concerns about the capacity of authorities, especially smaller ones, to formulate effective policies in response to these emerging challenges. Cohesion Policy can provide critical support to these authorities, helping them to develop the skills and expertise needed to respond to the challenges posed by the green transition, digitalisation, and demographic change.

Getting in touch with the EU

In person

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Online

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For access to legal information from the EU, including all EU law since 1951 in all the official language versions, go to EUR-Lex (eur-lex.europa.eu).

EU open data

The portal data.europa.eu provides access to open datasets from the EU institutions, bodies and agencies. These can be downloaded and reused for free, for both commercial and non-commercial purposes. The portal also provides access to a wealth of datasets from European countries.

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