

Towards a Sustainable Future: Embracing Just Transition in EU Agriculture through Modern Management and Policy Innovation.

Objective

This paper aims to explore the transition towards sustainable agriculture within the European Union (EU), emphasizing the need for a just transition that balances environmental sustainability with the economic and social well-being of farmers. It seeks to analyse the complex interplay between EU policies, the environmental imperatives driving agricultural sustainability, and the socio-political context highlighted by recent farmer protests across Europe. The objective is to provide a comprehensive understanding of how EU policies can support the agriculture sector in achieving Net Zero emissions while ensuring that the transition does not disproportionately impact farmers, thereby preventing socio-political backlash and ensuring long-term sustainability.

EU policies in the agricultural sector are at a critical juncture, facing the dual challenge of reducing environmental impact and supporting the livelihoods of the farming community. The backdrop of increasing farmer protests across major European cities underscores the urgency of addressing these challenges through coherent and inclusive policy frameworks. These protests reflect broader concerns over economic pressures, environmental regulations, and the pace of change, necessitating a nuanced approach to policy-making. The paper will delve into the role of EU policies such as the Common Agricultural Policy (CAP), environmental regulations, and incentives for sustainable practices, assessing their effectiveness in facilitating a transition that is both environmentally sustainable and socially equitable.

Policy Framework

The CAP 2023-2027 marks a pivotal shift in the European Union's agricultural policy, aligning closely with the Treaty on the Functioning of the European Union and aiming to modernize the sector to meet contemporary challenges. It retains the core objectives set out since its inception in 1962, such as increasing agricultural productivity, ensuring fair living standards for the agricultural community, market stabilization, supply assurance, and keeping consumer prices reasonable. This iteration introduces significant changes to enhance flexibility for Member States, allowing for the development of CAP Strategic Plans tailored to national needs while adhering to the European Green Deal's environmental and climate objectives. A key innovation in this policy period is the transition to a results-driven approach, prioritizing the achievement of specific and cross-cutting objectives through the Performance Monitoring and Evaluation Framework. This shift aims to ensure regular assessment of progress towards the CAP's ambitious goals. The 2023-2027 CAP underscores environmental and climate issues more heavily than its predecessors, with more stringent environmental standards, the introduction of eco-schemes, and a focus on supporting small and medium-sized farms. It is designed to foster a smart, resilient, and diversified agricultural sector that ensures long-term food security while enhancing environmental protection and promoting climate action. Moreover, the policy framework encourages Member States to exceed previous contributions towards sustainable management of natural resources and climate action. The increased environmental and climate-related ambition is reflected in the requirement for Member States to detail their strategies for making a greater overall contribution to these objectives in their CAP Strategic Plans.

The CAP's alignment with the European Green Deal, including the Farm to Fork Strategy and the EU Biodiversity Strategy 2030, further illustrates the EU's commitment to transforming agriculture into a more sustainable, competitive, and resilient sector. These strategies aim to reduce the use of

pesticides, increase organic farming, and enhance biodiversity, positioning agriculture at the heart of the EU's sustainability objectives.

Key challenges and drivers for EU agriculture

The agricultural sector operates as a complex and dynamic system, influenced by a multitude of drivers. These drivers can significantly impact the sector, either hindering or propelling its growth and sustainability in the short and medium term. Drivers are not static factors; they are dynamic forces or conditions that instigate change. They can originate internally or externally, operating at various scales from local to global. Challenges, on the other hand, represent obstacles that must be overcome to achieve specific goals. Drivers contribute to or exacerbate these challenges. For example, farmer resistance to change and the high cost of new technologies act as drivers for inadequate modernization and innovation. While drivers determine trends, short- and medium-term shocks also play a role, often bearing long-term consequences. In this context, we explore the key challenges faced by the EU agricultural sector, examining their underlying drivers, unique impacts, and interlinkages. This understanding influences farm-related, market-related, trade, and international aspects of the agrifood sector, contributing to its overall resilience.

Ensuring viable farm income and resilience is a key challenge for EU agriculture, with farmers earning on average just under half of what could be earned in other sectors, though this has increased from only a third a decade ago. This is related to the EU agriculture sector having a low and stagnant share of value added over the value chain, driven by high input costs, variation in production, and the incorporation of new services. However, novel business models are proving promising in this regard (Reparaz et al., 2021). Trade openness has also led to increased exposure to market shocks. As agricultural markets become more integrated globally, local agricultural sectors are more susceptible to price fluctuations and demand changes in the global market. This can lead to significant income volatility for farmers and disruption in local agricultural systems.

Increasing pressure on the EU's agricultural resource base due to growing food and industrial demand, driven by demographic changes and increases in disposable income, is also a challenge to farm income and resilience. As is the intensification of agricultural production, such as through high-density planting or livestock rearing, which has increased the exposure and spread of pests and disease leading to significant losses. Climate change can further exacerbate this issue, with increases in temperature and precipitation often creating more favourable conditions for certain pests and diseases.

The COVID-19 pandemic had a significant impact on the EU agriculture sector, testing its resilience. A study by the European Parliament found that during the pandemic, the EU agri-food supply chain demonstrated a high degree of resilience. However, sectors highly dependent on food service (e.g. wine, beef and veal), as well as flowers and plants and sugar, faced major difficulties and suffered considerable financial losses. The study outlined the need for policy responses that follow a 'food systems approach', accounting for the complex network of activities within the agri-food supply chain, and for the further reinforcement of EU financial capacity during crises.

Increased weather shocks due to climate change is another major challenge to the resilience of the EU agricultural sector. Changes in temperature and precipitation patterns, more frequent and severe extreme weather events, such as droughts, floods, and storms, can have devastating impacts on agricultural production. These weather shocks can lead to crop failures, livestock losses and decreased agricultural productivity.

The capacity of farmers to adapt to these shocks is often limited by factors such as access to information, financial resources and appropriate technology. This is particularly the case for

smallholder farmers, who are often the most vulnerable to these shocks. Improving resilience in the farming sector requires a comprehensive approach that addresses these various drivers. This could include measures to manage and mitigate risks associated with trade openness, strategies to adapt to and mitigate the impacts of climate change, practices to manage pests and diseases in a sustainable way, and support for farmers, particularly smallholders, to enhance their adaptive capacity.

Methods

The paper adopts a comprehensive approach to examine the Common Agricultural Policy (CAP) 2023-2027's objectives towards fostering a resilient, competitive, and sustainable EU agricultural sector. It outlines the policy landscape, delves into the sector's key challenges such as climate change and price volatility, and explores thematic scopes linked to these challenges. Using data from the Farm Accountancy Data Network (FADN) and econometric analysis, the study aims to understand the economic impacts of these challenges on farm income. This methodology enables a detailed examination of how external factors influence agricultural economics, supporting a nuanced policy analysis within the complex agri-food sector landscape. Moreover, we employ advanced econometric methods, such as regression analysis, panel data analysis, and time series forecasting, to dissect the impact of various challenges on farm incomes across the EU. By leveraging the rich dataset provided by the Farm Accountancy Data Network (FADN), this analysis offers a granular look at the economic realities faced by farmers, pinpointing how factors like climate change and market volatility affect agricultural profitability. Conducted at the EU level, this approach ensures a comprehensive understanding of the agricultural sector's dynamics, providing valuable insights for policy development and strategic planning.

Preliminary findings: Addressing Challenges with Equity and Sustainability through a Just Transition Framework

As the agricultural sector faces a myriad of challenges, from climate change to economic pressures, the concept of a just transition emerges as a critical framework. This approach seeks to ensure that the move towards a more sustainable and resilient agricultural system is inclusive, fair, and supports all stakeholders, especially those most at risk of being marginalized. Ensuring viable farm incomes is foundational to a just transition. It is essential that policies support farmers' ability to generate sustainable revenues while transitioning to eco-friendly practices. This means not only providing direct support through mechanisms like the Common Agricultural Policy (CAP) but also fostering market conditions that reward sustainable farming practices. Equity in support distribution, especially for small and medium-sized enterprises (SMEs) and farms in challenging environments, is crucial to prevent widening the gap between different farming communities.

Enhancing farm competitiveness in the context of a just transition involves investing in innovation, technology, and knowledge transfer that are accessible to all farmers. It is vital that these investments prioritize sustainability and resilience, ensuring farms can adapt to market and environmental changes without compromising their economic viability. Support for organic and high-quality produce can help farmers achieve a premium for their products, contributing to both environmental sustainability and economic competitiveness. A just transition emphasizes the importance of sustainable productivity, where technological advancements and innovations are leveraged to improve efficiency and reduce environmental impact. Supporting farmers in adopting these technologies, through financial and educational assistance, ensures that the transition is equitable. The focus should be on making sustainable practices viable for all, particularly small-scale and resource-constrained farmers.

Encouraging farmer cooperation is a cornerstone of a just transition, enabling farmers to share resources, access new markets, and improve their bargaining power. This cooperation can be a vehicle for spreading sustainable practices and innovations, ensuring that the benefits of the transition are shared widely across the agricultural community. A just transition requires that support mechanisms are designed to be fair and targeted, addressing the specific needs of the most vulnerable farmers. This means prioritizing support for small farms, those in less favourable areas, and farms transitioning to sustainable practices. Ensuring a balanced distribution of resources across sectors and regions is key to a just and equitable transition. Policies must facilitate access to affordable land for sustainable farming and ensure that farmers can reach markets to sell their sustainable products. This includes supporting new entrants and young farmers, who are essential for the sector's renewal and long-term resilience. The just transition framework acknowledges the need to manage structural changes in the sector, ensuring that the move towards fewer, larger, and more specialized farms does not disadvantage smallholders. Supporting generational renewal, through policies that attract and retain young farmers, is crucial for a vibrant and future-proof agricultural sector. As policy changes and technological innovations are necessary for a sustainable transition, ensuring that these changes are inclusive and consider the needs of all farmers is essential. This includes providing clear, accessible information and support to help farmers adapt to new regulations and technologies. Effective risk management and access to finance are critical for enabling farmers to invest in sustainable practices. Policies should provide tools and support for farmers to manage risks associated with volatile markets and climate change, ensuring that investments in sustainability are accessible and attractive. A just transition also involves addressing labour challenges, ensuring that the agricultural sector is a source of decent, fair, and safe employment. This includes compliance with social standards and addressing labour shortages through policies that support the sector's economic viability and attractiveness to workers.

Incorporating the just transition framework into addressing agricultural challenges ensures that the move towards a sustainable, resilient, and equitable agricultural sector is achieved. It requires a holistic approach, integrating economic, environmental, and social considerations, and ensuring that no farmer is left behind in the process.