

In July 2021, the European Commission adopted the European Green Deal (EGD) Strategy whose main goal is to make the EU climate-neutral by 2050, and to establish a fair. The implementation of the EGD can be expected to have a reducing effect on the Polish agricultural sector's plant production efficiency and volume. Hence, *ceteris paribus*, in the context of a price surge driven by the implementation of the EGD, the demand from international markets could switch to cheaper goods originating from countries outside the EU which are not subject to such stringent requirements for reducing the use of mineral fertilizers, plant protection products and genetically modified seeds.

The purpose of this project is to determine the possible consequences of implementing the EGD for the international trade competitiveness of the Polish agri-food sector. The research will validate the following hypotheses:

1. *Implementing the EGD will have an adverse effect on the trade balance in agri-food products both in the EU market and in relationships with third countries.*
2. *Implementing the EGD will have a reducing effect on Poland's comparative advantages in trading agri-food products in the exports of which it specializes.*

The goal of this study, which consists in determining the possible consequences of implementing the European Green Deal for the competitive position of the Polish agri-food sector in the European Union's market and beyond, will be pursued through the following research tasks:

1. Assessing the value and the commodity and geographical structure of trade in agri-food products prior to the implementation of the EGD;
2. Determining the conditions for the development of trade in agri-food products before the implementation of the EGD;
3. Ex-post assessment of comparative advantages of the Polish agri-food sector in trading with EU members and third countries (at the level of 2-digit HS trade codes, i.e. for 24 product groups);
4. Estimating the consequences of implementing the EGD for the balance of trade in agri-food products and for the level of comparative advantages in the EU market and with respect to third countries.

Currently, scientists and experts from various domains carry out intense research on the EGD and its potential impacts on different sectors of the economy. The European Green Deal was initiated in late 2019. As it is a relatively new concept, there is dearth of research projects which quantify the consequences of EGD implementation based on quantitative methods.

The analysis will allow for estimating the changes in the competitiveness of the Polish agri-food sector in international markets in the context of new environmental protection requirements and standards. It will provide a basis for formulating some recommendations on how to restructure trade patterns, as and if needed, in terms of both products and geographies, following the changes in the competitive position caused by EGD implementation.

Hence, this project will attempt to bridge the existing research gap. The use of the Global Trade Analysis Project (GTAP), a general equilibrium model, will allow to estimate the potential effects of changes to the agricultural policy not only on the agriculture sector but also on the whole Polish agri-food sector and on food consumers. Also, it will be possible to assess the macroeconomic consequences of implementing the EGD. In addition to a cognitive value, findings from the planned study will also have an utilitarian dimension. On that basis, it will be possible to formulate some recommendations for a trade policy that continues to comply with the EGD while aiming to assure a strong competitive position for the Polish agri-food sector in international markets. Ex-ante analyses will rely on the author's proprietary method of aggregating the GTAP database (as adjusted for the purposes of this study) and on simulation scenarios. This will enable the creation of an original methodological framework which extends the catalog of methods used in assessing the international competitiveness of the agri-food sector.