

## ALGORITHM FOR ASSESSING THE EU CONVERGENCE EFFECT BASED ON GRAVITY MODELS

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The research methodology uses gravity models to analyse the level of economic development of EU countries. Gravity models are widely used in the analysis of convergence of territorial development. Convergence is the process of convergence of development levels of territories over time. In order to assess the effect of convergence in the EU on the basis of gravity models, three steps are carried out (Fig. 2) [1].

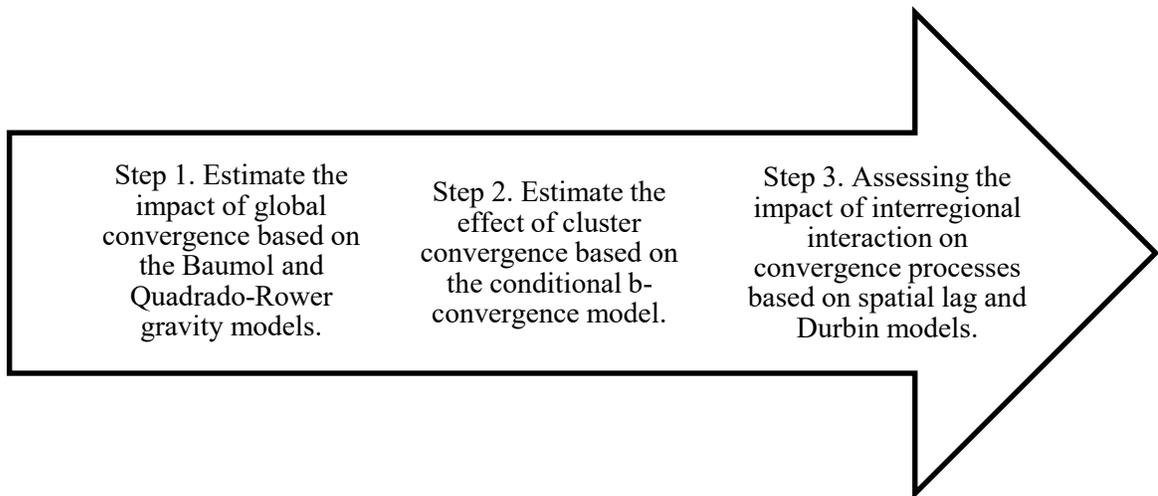


Figure 1 – Algorithm for assessing the EU convergence effect based on gravity models

In the first step, regression models are used to assess absolute (unconditional)  $\beta$ -convergence, where the dependent variable is the average growth rate of the indicator and the independent variable is its initial level [1].

In the second step,  $\beta$ -convergence occurs when the ratio between the growth rate of the regional development indicator per capita and its initial level is negative, provided that additional factors are included that are decisive for the sustainable development towards which the economic objects are moving [1].

The third step of the algorithm is based on the use of spatial lag and Durbin models.

The results of the study can be useful for choosing and justifying the development strategy of the financial systems of individual countries, since they allow assessing the degree of convergence of countries in terms of the level of economic development as a whole.

### References:

1. Кочорба В. Ю. Оцінка конвергенції економічного розвитку країн ЄС як підґрунтя розвитку фінансової системи країн / В. Ю. Кочорба, С. В. Прокопович // Ефективна Економіка. – 2024. - №7. <https://www.nayka.com.ua/index.php/ee/article/view/4222/4257>