

a pronounced decrease in funnel depth from 3 to 1.5 centimeters as levels rose from 3 to 9 centimeters, suggesting that atmospheric depth may similarly influence real tornado behavior and intensity.

Flow visualization using dye markers and particle tracking revealed complex internal dynamics with characteristic spiral motion patterns, descending peripheral flows, and ascending central currents. The central vortex column exhibited noticeable stochastic oscillations around its rotational axis, closely mirroring the unpredictable wandering motion observed in natural tornado events. A key finding involved developing practical vortex disruption methodologies; strategic placement of optimized grid structures at container bases effectively fragmented coherent vortices into multiple chaotic flow patterns, efficiently dissipating the concentrated kinetic energy of the central vortex and suggesting potential applications for targeted atmospheric vortex mitigation.

The research provides valuable, empirically grounded insights for developing enhanced early warning systems and science-based infrastructure protection measures. The validated laboratory models offer cost-effective and reproducible tools for continued fundamental research, engineering testing, and advanced education in atmospheric physics. This work demonstrates that controlled, systematic experimentation can yield practical conceptual solutions for complex natural disasters, contributing to proactive disaster prevention strategies in Belarus and other mid-latitude regions facing similar emerging meteorological threats in a changing climate. The promising disruption techniques warrant further investigation at larger scales to assess their practical feasibility for protecting critical infrastructure and populated areas.

A. M. Syshchenko

А. М. Сыщенко

ГрГУ им. Янки Купалы (Гродно)

Научный руководитель Д. Н. Скютте

PROSPECTS FOR ECONOMIC INTEGRATION IN THE POST-SOVIET SPACE

Перспективы экономической интеграции на постсоветском пространстве

Economic integration is part of the globalization of the world economy and progresses through five stages: free trade area, customs union, common market, economic union, and finally, economic and monetary union. Its development is stimulated by the removal of trade barriers, trade liberalization, expanded cooperation, a deeper division of labor, common interests and goals, as well as historical and cultural proximity and geographical neighborhood [1, p. 77]. The purpose of the study is to analyze the potential for economic integration within the CIS and identification of the key advantages of this process for the participating countries.

Following the dissolution of the USSR, which was based on close cooperative ties and a division of labor, strong economic relations emerged between the new independent states. Today, one of the key integration entities in the post-Soviet space is the EAEU. For the member states of the Union, the prospect of participation in integration aligns with their national interests and promises significant advantages.

The EAEU integration processes open up a broader market for producers from the member states, which stimulates the growth of mutual trade and allows them to sell products that are uncompetitive in Western markets.

The creation of the Single Economic Space establishes favorable conditions for the placement of production facilities and the restoration of cooperative ties between industries and enterprises.

Amid these processes, the rules of doing business are being streamlined: legal norms and technical regulations are being harmonized. Such harmonization reduces the risks of corruption and monopolistic collusion, fosters a healthier competitive environment, and improves the business climate. As a result, countries have an incentive to improve their tax systems, as companies can choose to register in states with more favorable tax regimes [2].

A favorable business climate, in turn, becomes the basis for growing inflows of foreign direct investment. These investments play a key role in modernizing the economy and accelerating technological development, thereby enhancing the integration effect.

Finally, all the aforementioned changes create the preconditions for a gradual equalization of the population's standard of living and a reduction in social imbalances. Thus, integration within the EAEU not only strengthens the economies of the member states but also opens up prospects for addressing social issues.

Therefore, Economic integration within the EAEU is a strategically important direction for the development of the member states. It ensures market expansion, harmonization of legislation, improvement of the investment climate, and restoration of cooperative ties, thereby promoting economic modernization. In the end, integration leads to the leveling of socio-economic conditions and the strengthening of the states' positions in the global arena.

References

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