

high speeds, we use oil because it helps to cool the parts down. "Closed" bearings come with grease already inside from the factory, so you never need to touch them. "Open" bearings are different – you have to add new grease to them every once in a while. Some special bearings, like those with a PTFE (Teflon) coating, can work for decades without any help. There are also fluid bearings that almost never wear out. Because machines put a lot of pressure on them over and over again, the rings are made of very hard, heat-treated steel to make sure they last a long time.

Hybrid bearings use ceramic balls instead of steel, making them light, hard, and safe from electricity. They are great for electric motors and wind turbines. Today, "smart bearings" also have sensors to track heat or vibration, so they can tell you when they need fixing. Magnetic and air bearings are even cooler because their parts don't touch, so there is almost no friction. With new materials like PTFE, bearings can now last for a very long time, even in tough jobs.

Bearings are a must-have part of modern machines. They help reduce friction, make equipment work better, and help it last much longer. You can find them almost everywhere – from cars to power plants and airplanes. New types, like hybrid, magnetic, or even "smart" bearings, show that they will play an even bigger role in making our technology more reliable and efficient in the future.

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ENVIRONMENTALLY ORIENTED INNOVATIVE SOLUTIONS AND ORGANIC PRODUCTION AS DRIVERS OF LONG-TERM BUSINESS SUSTAINABILITY

Було проаналізовано вплив екологічних стандартів та екоінновацій на діяльність підприємств. Висвітлено переваги впровадження органічних методів господарювання, роль екологічно орієнтованих інновацій у підвищенні ефективності бізнесу та залученні інвестицій. Визначено основні виклики, зокрема недостатню державну підтримку та брак уніфікованих стандартів, та запропоновано ключові напрями для розвитку сталого бізнесу.

Ключові слова: екологічні стандарти, екоінновації, органічне виробництво, сталий розвиток, бізнес-процеси, інвестиції.

The impact of environmental standards and eco-innovations on enterprise activities has been analyzed. The advantages of implementing organic farming methods and the role of environmentally oriented innovations in improving business efficiency and attracting investments are highlighted. The main challenges, including insufficient government support and the lack of unified standards, are identified, and key directions for the development of sustainable business are proposed.

Keywords: environmental standards, eco-innovations, organic production, sustainable development, business processes, investments

In the context of globalization and growing societal attention to environmental issues, compliance with environmental standards has become a crucial element of the long-term strategic development of enterprises. Today, such standards serve not only as tools for environmental protection but also as instruments for enhancing market appeal, strengthening financial stability, and building a positive corporate reputation. The implementation of environmentally oriented innovations helps businesses meet modern market requirements while promoting the principles of sustainable development. Therefore, analyzing the impact of environmental standards and innovations on

enterprise activities is highly relevant from both economic and socio-environmental perspectives.

The implementation of environmental standards is a significant step for enterprises seeking to integrate the principles of sustainable development into their operations. These standards allow companies to:

- reduce energy and resource costs;
- decrease environmental penalties;
- improve the company's reputation among consumers and partners.

This becomes particularly important in the context of growing environmental awareness among consumers, who increasingly prefer goods and services from companies that adhere to sustainable practices. In this regard, eco-innovations—new or improved products, processes, and solutions aimed at reducing negative environmental impact—play a key role [1, p. 92]. These innovations encompass not only technological solutions but also organizational and managerial changes. The use of eco-innovations creates a synergistic effect: it enhances social welfare while generating economic benefits for businesses, particularly through more efficient resource utilization and reduced waste management costs.

Special attention should be given to measures promoting the transition to organic farming methods, including:

- elimination of chemical fungicides, herbicides, synthetic fertilizers, and antibiotics, which implies excluding chemically synthesized substances, preservatives, artificial colors, hormones, flavorings, stabilizers, and taste enhancers;
- use of plant residues as fertilizers and crop rotation to restore soil fertility;
- adoption of biological plant protection methods;
- complete prohibition of genetically modified organisms [2, p. 178].

Applying such approaches not only reduces environmental burden but also opens new opportunities for businesses, including access to markets with increasing demand for organic products. Transitioning to organic farming methods benefits the environment and simultaneously provides new business opportunities. One of the main advantages of integrating eco-innovations into business processes is the potential to attract investments and financial support. This process includes several key aspects:

1. Investor and financial institution interest grows due to rising attention to environmental issues and sustainable development, increasing demand for enterprises that actively implement eco-innovations;
2. Rising demand for environmentally friendly technologies and products opens new markets for "green" investments, as investors recognize the potential in these markets and allocate resources accordingly;
3. Investments in eco-innovations can reduce enterprise vulnerability to risks related to changes in environmental legislation, shifting consumer preferences, and other ecological factors;
4. Access to grants and subsidies from governments and international organizations can serve as additional incentives for investors to support enterprises focused on eco-innovations.

It is important to note that the adoption of eco-innovations in business not only contributes to environmental protection but also serves as a key factor in achieving significant economic and social benefits. Among the main advantages is the reduction of energy and resource costs, which facilitates the creation of efficient and economically viable business processes [3, p. 38].

Despite numerous benefits, eco-entrepreneurship faces several significant challenges. A major issue remains insufficient government support. The lack of effective incentives and clear regulatory frameworks hinders the development of environmentally oriented business practices. Furthermore, the absence of unified standards complicates the assessment of the effectiveness of environmental measures, reducing investor and consumer trust.

Today, the implementation of environmental standards and innovations is no longer merely a trend but a strategic condition for ensuring the long-term success of enterprises. It allows for cost reduction, improved operational efficiency, strengthened reputation, and access to new market opportunities. Moreover, an environmentally oriented approach helps build trust among partners and investors. To achieve a substantial impact, it is necessary to create a supportive institutional

environment: the development of clear standards, the introduction of financial incentives, and the enhancement of informational support. Only through comprehensive cooperation between businesses, government, and society can eco-innovations become a true driver of sustainable economic development.

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THE TOO-CHEAP EFFECT: WHEN LOW PRICE REPELS THE BUYER

The study examines the "too cheap" effect, a consumer behavior phenomenon where excessively low prices repel buyers by signaling inferior quality or defects. Based on Ukrainian academic sources, the paper analyzes mechanisms of price perception, demand elasticity, and marketing strategies in retail and agro-industrial sectors. It highlights risks of sales decline and brand erosion from underpricing and suggests balanced value-based pricing to enhance competitiveness amid economic challenges.

Keywords: *too cheap effect, price perception, consumer behavior, demand elasticity, pricing strategies, marketing, competitiveness.*

Досліджено ефект «надто дешево» як феномен поведінки споживачів, коли надмірно низькі ціни відштовхують покупців через асоціацію з низькою якістю чи дефектами. На основі українських академічних джерел проаналізовано механізми сприйняття ціни, еластичність попиту та маркетингові стратегії в роздрібній торгівлі й агропромисловому комплексі. Підкреслено ризики зниження продажів та девальвації бренду від заниженого ціноутворення, запропоновано збалансовані підходи на основі цінності для підвищення конкурентоспроможності в умовах економічних викликів.

Ключові слова: *ефект надто дешево, сприйняття ціни, поведінка споживачів, еластичність попиту, стратегії ціноутворення, маркетинг, конкурентоспроможність.*

In the contemporary economic landscape, particularly within Ukraine's agro-industrial sector, pricing strategies play a pivotal role in shaping consumer behavior and market dynamics. The "too cheap" effect manifests when a product's price falls below a certain psychological threshold, triggering skepticism among buyers who associate it with compromised quality, obsolescence, or underlying issues in production. This phenomenon disrupts the traditional inverse relationship between price and demand, leading to a paradoxical decline in sales despite affordability. Drawing from established Ukrainian scholarship, this analysis delves into the mechanisms of price perception, illustrating how low prices can repel consumers and undermine business viability, while advocating for integrated pricing models that balance cost, value, and market positioning to foster resilience in sectors like