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**COGNITIVE-RATIONAL FINANCING STRATEGIES FOR
SUSTAINABLE FOOD SYSTEMS: FISCAL IMPERATIVES, INVESTMENT
DIFFERENTIATION AND THE MARKETING OF GREEN PRACTICES**

Abstract. The aim of this article is to identify and theoretically substantiate the balance between fiscal imperatives, investment differentiation, and green marketing as complementary mechanisms for enhancing the competitiveness and sustainability of food systems. The hypothesis is that the integration of tax differentiation and investment diversification within a cognitive-rational framework can strengthen systemic resilience by aligning fiscal incentives, financial flows, and social perception. To verify this, the research applies a combination of analytical, structural-functional, and comparative methods, supported by synthesis and abstraction, which allow for conceptualizing the interdependence of fiscal policy instruments, investment behavior, and marketing communication within sustainable finance. The study also uses elements of evolutionary and institutional analysis to trace how fiscal differentiation transforms investment logic and how marketing mechanisms translate economic imperatives into cognitive legitimacy. Thus, the formation of cognitive-rational strategies for financing sustainable food systems is understood as a systemic interaction between fiscal imperatives, investment differentiation, and the marketing of green practices. In the modern economic paradigm, fiscal policy is no longer limited to income redistribution but functions as a regulator of structural transformation through mechanisms of tax differentiation that stimulate innovation and sustainable business behavior. The private sector's response to these incentives takes the form of investment differentiation — the reallocation of capital toward low-carbon, climate-neutral, and circular directions that simultaneously enhance financial resilience and systemic

adaptability. However, the successful implementation of these economic strategies requires a cognitive foundation — social acceptance, trust, and legitimacy. This role is fulfilled by the marketing of green practices, which transforms economic incentives into ethical consumption norms, forming a new behavioral rationality and broad public support for sustainability policies. Such interaction generates a feedback effect: increasing demand for sustainable products stimulates new investments, expands fiscal revenues, and strengthens the resource base for further ecological reforms. As a result, a closed cognitive-rational architecture of sustainability emerges, in which tax systems define the structure of incentives, investment differentiation realizes them in the financial domain, and green marketing ensures social recognition and the long-term stability of economic development.

Keywords: international marketing; marketing strategy; green marketing; imperative; diversification; food system; food crisis; food security; agri-food chain; deficit; hunger; tax systems; taxation; financing; fiscal policy; investment strategy; investment activity; investment environment; capital market; FDI; competitiveness; innovation; sustainable development; EU.

INTRODUCTION

The global food system is entering an era of profound structural imbalance. Despite record agricultural output and technological advances, the world still faces a persistent food deficit and rising hunger. More than 700 million people remain undernourished, while food insecurity deepens under the pressure of geopolitical conflict, climate shocks, and disrupted trade and investment flows. The coexistence of overproduction and scarcity reveals not only the limits of supply-oriented policy but also cognitive and institutional asymmetries in global governance. Food scarcity today results less from insufficient production than from misaligned fiscal priorities, distorted investment allocation, and ineffective marketing governance that fails to coordinate expectations and choices along the agri-food chain.

Addressing this multidimensional crisis requires a shift from reactive management to proactive systemic design. Modern food systems must evolve from production-centered frameworks toward cognitive-rational governance, where fiscal instruments, investment strategies, capital market mechanisms, and marketing tools operate in synergy. In this configuration, food marketing is not a peripheral communication tool but a structural function of the system: it shapes credible information, signals costs and externalities, frames consumer and producer expectations, and legitimizes fiscal and financial incentives for sustainable behavior. In this framework, the capital market acts as a transmission channel through which fiscal incentives and FDI are converted into long-term financing for sustainable agri-food production.

The central hypothesis of this study is that sustainable food systems can be achieved through the integration of fiscal imperatives, investment differentiation, and marketing innovation within a single cognitive-rational model. Such integration transforms sustainability from a normative declaration into an operational principle of competitiveness, where growth, responsibility, and resilience reinforce one another. Marketing is pivotal to this transformation because it translates fiscal and investment logic into shared meanings and practical choices, reducing the gap between policy design and market behavior. The transformation of food systems in the twenty-first century shows that sustainable development cannot rely solely on technology or productivity gains. Persistent food deficit and recurrent hunger crises underscore the need for an institutional and financial architecture aligned with social and ecological imperatives and articulated through trustworthy marketing communication. The effectiveness of financial flows depends not only on capital availability but also on whether marketing transparently conveys risks, fairness, and purpose, enabling stakeholders to internalize long-term incentives.

Contemporary approaches emphasize three imperatives that must be reconciled. The fiscal imperative demands that tax systems perform adaptive and motivational functions. The investment imperative requires diversification of portfolios and instruments to reduce vulnerability and stimulate innovation. The marketing imperative links market information with fiscal and financial governance by establishing credible claims, verifiable standards, and

transparent narratives that create cognitive legitimacy for green practices. When these imperatives interact coherently, financial and marketing systems evolve from passive channels of exchange into dynamic institutions of adaptive learning, supporting ecological balance, competitiveness, and social equity.

From a cognitive-rational perspective, fiscal, investment, and marketing decisions are interconnected processes of institutional learning rather than isolated technical optimizations. Taxation and subsidies set the structure of incentives, investment strategies materialize those incentives across agri-food value chains, and food marketing aligns expectations through accountable communication and market signaling. The growing diffusion of green finance and responsible marketing demonstrates that markets are internalizing ethical and ecological imperatives, yet their effectiveness depends on how fiscal differentiation, investment diversification, and marketing transparency interact to shape stable, long-term behavioral change. The cognitive-rational model of financing sustainable food systems therefore serves both as a policy framework and as a conceptual architecture in which marketing operates as a mechanism of governance, anchoring fiscal and investment reforms in durable social acceptance.

Statement of the problem. Despite the proliferation of sustainability-oriented initiatives, the financing architecture of global food systems remains fragmented, inconsistent, and often reactive. Fiscal and investment mechanisms are still designed primarily to correct market failures rather than to guide systemic transformation. As a result, financial incentives frequently fail to align with long-term sustainability goals, creating a gap between declared policy objectives and actual investment behavior. The dominance of short-term profitability continues to undermine ecological responsibility and social inclusion, while fiscal instruments remain detached from behavioral and cognitive dimensions of decision-making.

The core problem lies in the absence of an integrated framework that connects fiscal differentiation, investment diversification, and cognitive-rational coordination. Current models of food system finance typically focus either on economic efficiency or on environmental performance, without capturing the communicative and cognitive mechanisms that generate trust and adaptive learning among stakeholders. Without this synthesis, fiscal reforms risk remaining technocratic, investment diversification becomes superficial, and green marketing loses its transformative potential.

Addressing this gap requires a conceptual transition toward a cognitive-rational model of financing sustainable food systems — one that interprets fiscal and investment instruments not as isolated tools but as interdependent elements of a broader governance system. Such a model must integrate the fiscal imperative of adaptive taxation, the investment imperative of portfolio diversification, and the communicative imperative of transparency and legitimacy. Only through their convergence can sustainable finance evolve into a self-reinforcing mechanism that strengthens competitiveness, supports innovation, and enhances the resilience of food systems against global shocks.

Analysis of the latest research and publications. The conceptual foundations of sustainable food system financing have evolved through several theoretical trajectories that combine classical economic rationality with institutional and cognitive approaches. Early development and dependency theories emphasized structural asymmetries between resource production and capital accumulation, demonstrating how unequal trade patterns shape systemic vulnerabilities and policy constraints [1], [2]. Subsequent research within the paradigm of neo-dependency revealed that the capacity of developing economies to finance sustainable growth depends not only on production efficiency but also on institutional adaptation and the diversification of financial relations [3]. This shift from material production to institutional coordination laid the groundwork for a cognitive-rational understanding of economic governance.

The theoretical contribution of rational policy design [4] established that fiscal instruments must align with explicitly defined objectives to ensure policy coherence and legitimacy. In contemporary interpretation, this logic extends to fiscal and investment frameworks of sustainability: tax differentiation and financial incentives are not only technical mechanisms but also expressions of the fiscal imperative as the structural necessity to reconcile efficiency with equity. Fiscal differentiation thus emerges as a dynamic instrument of adaptive governance, linking public revenues to environmental and social outcomes and encouraging behavioral change through transparent incentives. Modern research on global business, trade cooperation, and integration processes underscores the role of institutional learning and cognitive trust in shaping economic transformation [5]–[7]. These studies reveal that the sustainability of financial and marketing systems depends on how effectively institutions internalize ethical and environmental priorities. The integration of cognitive and communicative tools into management practices enables enterprises to balance innovation with competitiveness, ensuring their adaptability to global challenges.

Within the domain of international trade regulation and export promotion, recent analyses highlight the imperative of diversification, both as a financial mechanism and as a strategy of resilience [8], [9]. Diversification mitigates the risks of mono-sectoral dependence, supports innovation diffusion, and enhances the competitiveness of agri-food enterprises. This logic parallels the evolving paradigm of the circular and green economy, which redefines value creation through closed-loop systems, low-carbon production, and green investment mechanisms [10]–[16]. A growing body of research interprets the circular transition as a process of cognitive institutionalization, where financial instruments, including green bonds, sustainability-linked loans, and blended finance, perform both an economic and communicative function. They not only allocate resources but also convey social meaning by signaling trust and shared responsibility among economic actors. This perspective reinforces the view that sustainable finance cannot be reduced to accounting models; it is embedded in networks of beliefs, values, and cognitive expectations that define legitimacy in the marketplace.

The evolution of green marketing research has further demonstrated that sustainability transitions depend on the cognitive dimension of communication [17]–[19]. Marketing acts as a mechanism that translates ethical imperatives into market behavior and coordinates the interaction between consumers, firms, and regulators. Studies in international business emphasize that the ethical and environmental imperatives of global markets transform marketing from a promotional instrument into an institutional driver of collective adaptation [20]. This transformation aligns with the fiscal and investment imperatives of sustainable finance, where communication and transparency become conditions of policy success. From a macroeconomic perspective, cognitive-rational governance combines the analytical rigor of fiscal policy with the adaptive flexibility of communicative coordination. The diversification of financial and investment instruments — a key principle in both circular economy models and private equity strategies — allows the system to absorb shocks, channel resources into green innovation, and sustain competitiveness [21], [22]. The interplay between fiscal differentiation and investment diversification thus defines the operational logic of modern sustainability finance.

Recent analytical reports by international institutions confirm the relevance of this synthesis. The global architecture of sustainable food system finance increasingly reflects the principles of cognitive-rational governance: financial instruments are designed not merely to generate returns but to create knowledge, transparency, and adaptive learning. The Driving Finance for Sustainable Food Systems [23] report emphasizes the necessity of aligning financial flows with sustainability outcomes through coherent fiscal incentives, blended finance structures, and data transparency. Similarly, The Rise of Sustainable Food and Agriculture

Strategies in Private Equity [24] highlights the shift of private capital toward circular and regenerative business models, identifying cognitive legitimacy — the shared understanding of sustainability as a determinant of investment resilience. Overall, the reviewed literature demonstrates a convergence between cognitive, fiscal, and investment paradigms. The sustainability of food systems increasingly depends on their capacity to integrate rational economic instruments with cognitive and communicative coordination. Fiscal differentiation, investment diversification, and marketing transparency function as complementary imperatives that construct the institutional framework of sustainable competitiveness. In this regard, cognitive–rational finance appears not as a new discipline but as a cross-cutting paradigm of adaptive governance, one that transforms the financial structure of food systems into a self-learning, trust-based mechanism of sustainable development.

The purpose of this article is to substantiate a cognitive–rational framework for financing sustainable food systems, integrating fiscal imperatives, investment diversification, and the marketing of green practices into a coherent governance model. This approach seeks to overcome the fragmentation of traditional fiscal and financial instruments by interpreting them as interrelated mechanisms of adaptive policy design. Within such a framework, fiscal differentiation acts as an instrument of behavioral coordination, investment diversification strengthens systemic resilience, and marketing serves as a communicative channel that legitimizes sustainability transitions through trust and transparency. The study aims to reveal how the synergy of these components can enhance innovation, competitiveness, and the institutional capacity of food systems to achieve long-term sustainability.

RESEARCH RESULTS

The empirical results of this study confirm that the transformation of modern food systems is determined by the interaction of fiscal, investment, and cognitive–behavioral factors, which together define the boundaries of competitiveness and sustainability. Within this framework, food marketing is not limited to promotional functions but emerges as a strategic coordination mechanism integrating fiscal policy, investment diversification, and innovation imperatives. The findings show that countries able to align these three dimensions achieve higher systemic resilience and stronger capacity to adapt to global food crises. The first analytical block concerns the fiscal differentiation of national tax systems. The evidence suggests that tax policy, when properly designed, functions as both a redistributive and developmental instrument. Differentiated taxation in the agri-food sector — including green tax credits, innovation-based deductions, and reduced rates for sustainable technologies — creates positive externalities that reinforce investment rationality and stimulate structural modernization. The OECD [25] and IMF [26] emphasize that fiscal differentiation has a dual effect: on one hand, it internalizes environmental externalities by correcting market signals; on the other, it encourages the reallocation of capital toward low-carbon and circular activities. In this sense, fiscal differentiation becomes a structural imperative of sustainable competitiveness rather than a mere budgetary adjustment tool.

The second analytical dimension focuses on investment diversification as a mechanism of risk management, capital mobilization, and cognitive adaptation. Diversification of financial portfolios, technological pathways, and value chains reduces systemic vulnerability and enhances the adaptive potential of food systems. Within this framework, the capital market acts as a key transmission channel between fiscal incentives and private investment decisions. By directing savings into productive, sustainable, and innovation-oriented assets, capital markets transform fiscal differentiation into measurable investment outcomes. The deepening of sustainable finance instruments, such as green bonds, sustainability-linked loans, and impact investment funds — expands access to capital for agri-food enterprises pursuing low-carbon transformation.

At the same time, FDI plays a catalytic role in spreading technological and managerial innovations across borders, strengthening the integration of national food systems into global value chains. FDI inflows into the agri-food sector enhance knowledge transfer, stimulate the development of local infrastructure, and generate spillover effects that improve competitiveness and productivity. According to UNEP [23] and FAO [27], sustainable investment strategies that combine domestic capital market development with the attraction of FDI contribute not only to productivity growth but also to long-term supply stability.

This approach corresponds to the cognitive-rational paradigm, in which investors and policymakers act on the basis of both analytical modeling and social trust. Investment diversification thereby becomes a behavioral and institutional instrument of resilience, capable of transforming uncertainty into a structured opportunity. When linked with the capital market and FDI flows, it generates a synergistic effect that channels resources toward innovation, reinforces fiscal incentives, and supports the green modernization of food systems.

The third finding concerns the role of marketing in synchronizing fiscal and investment imperatives. Marketing in the contemporary food economy operates as an integrative communication system that translates fiscal stimuli and investment innovations into social norms, consumer expectations, and behavioral choices. This transformation reflects the transition from transactional to cognitive-rational marketing, where competitive advantage arises not merely from price mechanisms but from credibility, ethical alignment, and the ability to articulate sustainability as a shared value. Marketing differentiation through adaptive pricing, targeted narratives, and data-driven communication enhances not only consumer loyalty but also the fiscal efficiency of policy instruments, since public acceptance amplifies the effectiveness of incentives. The data further indicate that innovation and diversification jointly function as the dynamic core of competitiveness in sustainable food systems. The implementation of circular business models, smart logistics, and digital traceability platforms enables both producers and regulators to minimize transaction costs and ensure transparency. Empirical observations from Campbell Lutyens [24] demonstrate that private equity strategies increasingly rely on cognitive metrics — such as stakeholder confidence and sustainability perception — as indicators of long-term profitability. Thus, the cognitive-rational approach to investment behavior aligns private capital flows with public sustainability imperatives.

The integration of fiscal differentiation, investment diversification, and marketing innovation forms the foundation of what can be termed a cognitive-rational governance architecture of food systems. Within this architecture, the fiscal system operates as the structural regulator of incentives; the investment system acts as the channel of adaptive diversification; and marketing functions as the communicative engine that maintains coherence among economic logic, ethical imperatives, and public cognition. This triadic structure allows the food system to evolve as a self-adjusting ecosystem, where policy effectiveness depends not only on economic parameters but also on the credibility and cognitive resonance of institutional actions.

Building upon the previous findings, the cognitive-rational framework of sustainable food system governance may be represented as a matrix of interdependencies among fiscal, investment, and marketing strategies. This analytical configuration reflects not only the economic but also the cognitive architecture of decision-making. It assumes that rationality in food policy emerges at the intersection of three imperatives: fiscal differentiation, investment diversification, and marketing innovation. Each of these imperatives contributes to system resilience through specific mechanisms of adaptation, communication, and motivation.

In this framework, fiscal differentiation provides the structural foundation for sustainability. By integrating green taxation, targeted subsidies, and preferential crediting, the fiscal system creates measurable incentives that shape the economic environment. However,

fiscal efficiency alone cannot guarantee competitiveness. It must be reinforced by investment diversification, which distributes risks and channels resources toward innovative sectors of the food economy. Diversification transforms the fiscal signal into long-term strategic behavior, ensuring that public incentives stimulate private capital formation in sustainable domains rather than short-term consumption or speculative cycles.

Marketing innovation completes the system by ensuring cognitive coherence between the state, investors, and consumers. It translates policy incentives into behavioral motivations, enabling the internalization of sustainability values within consumer culture. In this sense, marketing functions as a cognitive interface — a feedback mechanism that transforms abstract fiscal and investment principles into recognizable social norms. Consequently, public trust becomes both an economic and institutional asset: fiscal policy gains legitimacy, investment flows stabilize, and the overall competitiveness of the food system increases. The resulting cognitive-rational interdependence matrix is presented below (Table 1). It summarizes the systemic functions of each strategic domain and their reciprocal effects on resilience, adaptability, and competitiveness. The cognitive-rational matrix emphasizes that policy success depends not merely on the efficiency of individual instruments but on their systemic coherence. Fiscal differentiation sets the direction of incentives; investment diversification provides the means of material realization; and marketing innovation generates the social and psychological conditions for sustainability acceptance. The integration of these domains forms a multidimensional structure where economic rationality and cognitive legitimacy reinforce one another.

Table 1

**Cognitive-rational interdependence matrix of
fiscal, investment and marketing strategies**

Strategic Imperative	Functional Role	Mechanism of Influence	Expected Effect on the Food System
Fiscal differentiation	Creates structural incentives for sustainability; corrects market failures through green taxation and subsidies	Redistribution of resources via eco-taxes, innovation deductions, and reduced rates for sustainable technologies	Enhanced fiscal efficiency, improved alignment of public and private goals, reduction of environmental externalities
Investment diversification	Distributes risks and supports innovation across food value chains	Allocation of capital to regenerative, circular, and digital sectors	Increased adaptability and long-term stability, stimulation of technological modernization
Marketing innovation	Translates fiscal and investment signals into behavioral change and social legitimacy	Differentiated narratives, ethical branding, digital transparency	Strengthened consumer trust, increased policy acceptance, and cognitive alignment of stakeholders
Systemic integration (synergy)	Coordinates the three imperatives into a unified cognitive-rational governance structure	Feedback loops between economic incentives and collective cognition	Sustainable competitiveness, resilience to food crises, and institutional learning

Source: developed by the authors

Moreover, the findings indicate that the resilience of a national food system is determined by its ability to institutionalize this triadic coordination. Countries that implement fiscal instruments without communicative legitimacy often face resistance or inefficiency, while those emphasizing marketing without financial or fiscal coherence risk short-term instability. A balanced, feedback-based approach enables adaptive learning, where policy evolves through iterative cycles of evaluation, perception, and reform. Thus, the cognitive-rational model

transforms the concept of food system governance from a linear economic process into an adaptive institutional ecosystem. Within it, fiscal and investment policies do not merely respond to external shocks but anticipate them through diversification and innovation. Marketing ensures that these adaptive mechanisms are cognitively internalized within society, transforming sustainability from a policy goal into a shared behavioral norm.

In the European Union, the sustainable transformation of food systems has evolved into a central strategic imperative of economic and environmental policy. The process is guided by the principle that competitiveness, inclusiveness, and ecological responsibility must function as complementary rather than conflicting objectives. The transition toward sustainable agri-food systems requires the synchronization of fiscal mechanisms, investment flows, and marketing communication within a coherent institutional framework. The transformation of European food chains reveals that sustainability cannot rely solely on technological innovation or private investment. It demands an integrated fiscal architecture that differentiates taxation according to the environmental impact of production and consumption, stimulating low-emission practices and penalizing resource-intensive activities. Fiscal policy thus becomes an operational instrument of behavioral change, encouraging enterprises to internalize environmental costs and adopt circular business models. This approach aligns with the broader institutionalization of climate change governance and the socio-economic effects of industrial decarbonization within the European Union [7].

At the same time, the evolution of marketing communication in the European food sector demonstrates the growing need for transparency and accountability [28]. The spread of environmental and “climate-neutral” claims has exposed the limits of voluntary self-regulation and the risks of consumer misinformation. Effective governance therefore requires the establishment of cognitive–rational coordination between policy incentives and communicative practices. Marketing must no longer serve as a symbolic representation of sustainability, but as a credible mechanism for building trust and ensuring that fiscal incentives are translated into measurable, long-term environmental outcomes. The European approach illustrates the emergence of a new paradigm of green competitiveness based on fiscal differentiation, investment diversification, and marketing responsibility. Through this synthesis, the food sector is gradually transforming into a field of adaptive governance, where fiscal instruments, innovation, and communication operate in concert to balance growth with sustainability.

In summary, the cognitive–rational approach to financing sustainable food systems offers a conceptual and practical framework for harmonizing fiscal policy, investment activity, and marketing governance. By establishing an integrated mechanism that connects innovation, responsibility, and communication, economies can transform sustainability from a regulatory requirement into a competitive advantage. The European trajectory of reform demonstrates that fiscal differentiation and investment diversification, when supported by transparent marketing practices, create the institutional foundation for long-term food security and ecological balance [29]. These insights provide a theoretical and methodological basis for further research on adaptive models of sustainable competitiveness and their application within national and global food systems.

CONCLUSIONS AND PROSPECTS FOR FURTHER RESEARCH

The conducted research confirms that the sustainable transformation of food systems depends on the cognitive–rational coordination of fiscal, investment, and marketing instruments. The integration of fiscal imperatives and investment differentiation into a unified governance model allows the food system to evolve from a reactive economic structure into a proactive mechanism of adaptation and competitiveness. Fiscal policy serves not only as a redistributive tool but also as a behavioral instrument that translates ecological responsibility

into economic incentives. Differentiated taxation and targeted fiscal benefits stimulate innovation and direct capital toward sustainable production, while reducing the systemic risks associated with resource overuse and environmental degradation.

The European experience demonstrates that the effectiveness of fiscal and investment instruments is determined by the degree of their cognitive and communicative legitimacy. Sustainable transitions require not only technical accuracy but also social trust: citizens and enterprises must understand and accept the rationale behind policy measures. Marketing, in this context, becomes a vital channel of coordination, transforming abstract policy frameworks into shared behavioral norms. When aligned with fiscal differentiation and investment diversification, marketing evolves from a communicative tool into a governance mechanism capable of guiding both producers and consumers toward long-term sustainability goals.

The interdependence between fiscal policy, investment strategy, and marketing communication forms the analytical foundation of a cognitive-rational model of sustainable competitiveness. This model rests on three core assumptions: first, that fiscal instruments can act as catalysts of innovation and accountability; second, that investment diversification reduces systemic vulnerability and enhances adaptive capacity; and third, that marketing communication ensures cognitive coherence between economic behavior and sustainability objectives.

The study thus concludes that the balance between fiscal rationality, investment activity, and marketing responsibility defines the future trajectory of sustainable food systems. The cognitive-rational paradigm establishes a new standard for economic governance, in which competitiveness is achieved not at the expense of sustainability, but through it. Further research should focus on developing quantitative models that measure the feedback loops between fiscal differentiation, innovation incentives, and behavioral responses within the food sector. Empirical testing of the cognitive-rational framework in different institutional environments would make it possible to evaluate the resilience of national food systems and identify policy combinations that maximize both efficiency and equity in the global green transition.

REFERENCES (TRANSLATED AND TRANSLITERATED)

1. Nurkse, R. (1962). *Patterns of trade and development*. Oxford, UK: Blackwell.
2. Institute for New Economic Thinking (Ed.). (2017). *Dialogues on development. Volume I: On dependency* (112 pp.). <https://www.ineteconomics.org/uploads/downloads/Dependency-theory-e-book-online.pdf>
3. Reznikova, N. V. (2013). Economic challenges of neo-dependency: Conflict of interests in the context of global interaction. *Strategy of Ukraine's Development: Economics, Sociology, Law*, (1), 181–187. [in Ukrainian]
4. Arrow, K. J. (1958). Tinbergen on economic policy. *Journal of the American Statistical Association*, 53(281), 89–97.
5. Ptashchenko, O. V., & Shersheniuk, O. M. (2023). Methodological bases of management of business activity of enterprises in the conditions of globalization. *Problems and Prospects for Business Development: Collected Scientific Papers of Kharkiv National Automobile and Highway University*, (1)30, 38–57. Kharkiv: KhNAHU.
6. Ptashchenko, O. V., & Vovk, V. A. (2021). Features of Ukraine's trade cooperation in the current conditions of globalization. *Business Inform*, (4), 42–47. <https://doi.org/10.32983/2222-4459-2021-4-42-47> [in Ukrainian]
7. Ptashchenko, O., Panasenko, H., Liapa, M., Sokhatskyi, O., Mudra, Y., & Pylypenko, N. (2022). Institutional instruments of Ukraine's Euro-Atlantic integration. *Economic Affairs*, 67(3), 337–344. <http://ndpublisher.in/admin/issues/EAv67n3z.pdf>
8. Panchenko, V. H., & Pinchuk, Y. V. (2024). Current trends in the regulation of international trade in the conditions of excessive conflict of socioeconomic interests. *Bulletin of Mariupol State University. Series: Economics*, (27), 5–14. <https://doi.org/10.34079/2226-2822-2024-14-27-5-14> [in Ukrainian]
9. Panchenko, V., & Pinchuk, Yu. (2024). The role of export promotion policy in industrial development (on the example of Asian countries). *Agrosvit*, (10), 68–77. <https://doi.org/10.32702/2306-6792.2024.10.68> [in Ukrainian]

10. Reznikova, N., & Grod, M. (2024). Macroeconomic impacts of the circular transition: The green swans of decarbonization on the path to sustainability. *Actual Problems of International Relations*, 1(160). <https://doi.org/10.17721/apmv.2024.160.1.110-120>
11. Reznikova, N. V., & Grod, M. I. (2023). Formation of institutional support for the development of the circular economy and its sustainable financing in the European Union. *Economy of Ukraine*, 11(744), 52–75. <https://doi.org/10.15407/economyukr.2023.11.052> [in Ukrainian]
12. Grod, M., & Reznikova, N. (2023). Regulatory traps of the circular economy in the EU's sustainability transition policies. *Investments: Practice and Experience*, 16, 49–57. <https://doi.org/10.32702/2306-6814.2023.16.49> [in Ukrainian]
13. Grod, M., & Reznikova, N. (2023). The circular economy in the concept of sustainable development: Paradoxes of the international macroeconomic environment and financing of green growth. *Scientific Bulletin of the Odessa National Economic University*, 7–8(308–309), 155–166. <https://doi.org/10.32680/2409-9260-2023-7-8-308-309-155-166> [in Ukrainian]
14. Grod, M., & Reznikova, N. (2023). Features of financing the development of the circular economy and international trade on the principles of circularity: New investment instruments and the potential of supranational regulatory policy. *Modeling the Development of Economic Systems*, 2, 55–64. <https://doi.org/10.31891/mdes/2023-8-8> [in Ukrainian]
15. Grod, M., & Reznikova, N. (2023). Financial and investment instruments for promoting the circular economy: Sustainable development and climate neutrality as triggers of greening international capital markets. *Bulletin of Khmelnytskyi National University. Economic Sciences Series*, 3(318), 249–259. <https://doi.org/10.31891/2307-5740-2023-318-3-39> [in Ukrainian]
16. Reznikova, N., & Grod, M. (2024). Institutionalization of climate change combat in the EU and socio-economic effects of industry decarbonization. *Actual Problems of International Relations*, 158(1), 59–69. <https://doi.org/10.17721/apmv.2024.158.1.59-69> [in Ukrainian]
17. Karp, V., Reznikova, N., & Ivashchenko, O. (2023). Imperativization of sustainable development ideas in green marketing: International business in the coordinates of ethical consumption and fair trade. *Investments: Practice and Experience*, 18, 18–25. <https://doi.org/10.32702/2306-6814.2023.18.18> [in Ukrainian]
18. Karp, V., Reznikova, N., & Ivashchenko, O. (2023). The climate agenda and the global business environment: The role of green marketing in promoting sustainable development goals. *Efektivna Ekonomika*, 9. <https://doi.org/10.32702/2307-2105.2023.9.5> [in Ukrainian]
19. Karp, V., Reznikova, N., & Ivashchenko, O. (2023). Sustainable development of green marketing: The environmental and security imperative of international business as a component of the global climate agenda. *Agrosvit*, 17, 3–21. <https://doi.org/10.32702/2306-6792.2023.17.3> [in Ukrainian]
20. Ptashchenko, O. V. (2017). Specifics of using integrated marketing communications in modern business activity. *Socio-Economic Development of Regions in the Context of International Integration*, 26(15), 86–89. [in Ukrainian]
21. Ptashchenko, O. V. (2018). Features of high-tech marketing under globalization. *Chernihiv Scientific Journal. Series 1: Economics and Management: Electronic Collection of Scientific Papers*, 1(9), 40–45. [in Ukrainian]
22. Ptashchenko, O. V., Bozhkova, V. V., Sager, L. Yu., & Syhina, L. O. (2018). Transformations of marketing communication tools under globalization. *Marketing and Management of Innovations*, 1, 73–82. [in Ukrainian]
23. United Nations Environment Programme. (2023). *Driving finance for sustainable food systems*. Nairobi: UNEP.
24. Campbell Lutyens. (2023). *The rise of sustainable food and agriculture strategies in private equity*. London: Campbell Lutyens Research Series.
25. Organisation for Economic Co-operation and Development (OECD). (2022). *Tax policy and environmental sustainability*. Paris: OECD Publishing.
26. International Monetary Fund. (2023). *Fiscal policies for the climate transition*. Washington, D.C.: IMF.
27. Food and Agriculture Organization of the United Nations. (2023). *Food systems transformation: Financing, policy coherence, and innovation pathways*. Rome: FAO.
28. BEUC. (2023). *A climate-neutral food basket: Too good to be true?* Brussels: Bureau Européen des Unions de Consommateurs. https://www.beuc.eu/sites/default/files/publications/BEUC-X-2023-025_A_climate-neutral_food_basket-Too_good_to_be_true.pdf
29. Vasiliu, C. (2022). Food chains transformation in the context of EU Green Deal strategy. *Amfiteatru Economic Journal*, 24(60), 305–307. <https://doi.org/10.24818/EA/2022/60/305>

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КОГНІТИВНО-РАЦІОНАЛЬНІ СТРАТЕГІЇ ФІНАНСУВАННЯ СТАЛИХ ПРОДОВОЛЬЧИХ СИСТЕМ: ФІСКАЛЬНІ ІМПЕРАТИВИ, ІНВЕСТИЦІЙНА ДИФЕРЕНЦІАЦІЯ ТА МАРКЕТИНГ ЗЕЛЕНИХ ПРАКТИК

Анотація. Формування когнітивно-раціональних стратегій фінансування сталих продовольчих систем ґрунтується на системній взаємодії між фіскальними імперативами, інвестиційною диференціацією та маркетингом зелених практик. У сучасній економічній парадигмі фіскальна політика перестає бути виключно інструментом перерозподілу доходів, набуваючи ролі регулятора структурних зрушень через механізми податкової диференціації, які стимулюють інноваційність і стаю поведінку бізнесу. Відповіддю приватного сектору на такі стимули стає інвестиційна диференціація — переорієнтація капіталу на низьковуглецеві, екологічно нейтральні та циркулярні напрями, що водночас підвищує фінансову стійкість і адаптивність системи. Проте реалізація цих економічних стратегій потребує когнітивного підґрунтя — соціального прийняття, довіри та легітимності. Цю функцію виконує маркетинг зелених практик, який перетворює економічні стимули на етичні норми споживання, формуючи нову поведінкову раціональність і суспільну підтримку політики сталого розвитку. Така взаємодія створює ефект зворотного зв'язку: підвищення попиту на сталі продукти стимулює нові інвестиції, збільшує податкові надходження і розширює ресурсну базу для подальших екологічних реформ. У результаті формується замкнена когнітивно-раціональна архітектура сталості, у якій податкові системи задають структуру стимулів, інвестиційна диференціація реалізує їх у фінансовому просторі, а маркетинг зелених практик забезпечує соціальне визнання та стабільність економічного розвитку.

Ключові слова: міжнародний маркетинг; маркетингова стратегія; зелений маркетинг; імператив; диверсифікація; продовольча система; продовольча криза; продовольча безпека; агропродовольчий ланцюг; дефіцит; голод; податкові системи; оподаткування; фінансування; фінансова політика; інвестиційна стратегія; інвестиційна діяльність; інвестиційне середовище; ринок капіталу; ПШ; конкурентоспроможність; інноваційність; сталий розвиток; ЄС.

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