

A Study on the Economic Effects of the Belt and Road Initiative: Mechanisms, Empirical Evidence, and Reflections

Fan Jiang¹, Yuhong Li²

¹Academic Affairs Office, Anqing Normal University, Anqing 246133, Anhui, China

²School of Economics and Management, Anqing Normal University, Anqing 246133, Anhui, China

Copyright: © 2026 Author(s). This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY 4.0), permitting distribution and reproduction in any medium, provided the original work is cited.

Abstract: Over the past decade since the Belt and Road Initiative (BRI) was proposed, the economics literature has grown exponentially, yet empirical findings have become increasingly divergent. This paper is not a simple literature compilation, but rather a deep integration with methodological self-awareness. It traces three strands of theoretical mechanisms—gravity model extensions, institutional economics, and global value chain restructuring—and then focuses on four core areas: trade, investment, debt, and the environment. For each area, it dissects the research design, identification strategies, and inherent vulnerabilities of key studies. The findings indicate that infrastructure improvements have indeed generated trade creation and energy reduction effects. However, the parallel trends assumption in difference-in-differences designs, the choice of spatial spillover matrices, and the lack of general equilibrium feedback pose significant challenges to external validity. In the investment domain, case-specific inferences using synthetic control methods are susceptible to sparse weighting, and the ownership heterogeneity between state-owned and private enterprises has yet to be adequately incorporated into structural estimations. The debt trap narrative lacks systematic empirical support, while parameter calibration issues and the unavailability of loan-term data have kept the debate largely at the discursive level. This paper argues that methodological fragmentation, scarce micro-level data, and the absence of dynamic perspectives collectively constrain theoretical accumulation. Future research must confront three persistent tensions—between internal and external validity, between partial and general equilibrium, and between case-specific inference and average effects—and shift from “policy effect identification” to “mechanism deconstruction and conditional analysis.” Advancing project-level database construction, cross-method robustness comparisons, and country-specific systematic risk assessments will also be essential.

Keywords: Belt and Road Initiative; Trade effects; Foreign direct investment; Causal identification; Synthetic control method; Debt sustainability

Online publication: September 30, 2026

1. Introduction

The “Belt and Road” Initiative has grown from an initial foreign policy vision into a transnational infrastructure

and economic cooperation network covering more than 150 countries and involving trillions of dollars in investment ^[1,2]. Alongside this, academic research has undergone a paradigm shift from macro-strategic interpretation to quantitative effect assessment. Early literature mostly remained at the level of policy exposition and geopolitical analysis, whereas in the past seven to eight years, the field of economics has begun to extensively adopt econometric methods and structural models, attempting to answer a more specific and more intractable question: How large are the economic effects of the “Belt and Road” Initiative? Have trade flows increased significantly? Has outward investment genuinely promoted industrialization in host countries? Are there observable growth dividends from infrastructure construction? These questions concern not only the performance evaluation of the Initiative itself but also the testing of classic theories in development economics, such as infrastructure spillover effects, institutional thresholds, and value chain upgrading ^[3,4]. However, a puzzling phenomenon has gradually emerged: studies addressing similar topics often reach mutually contradictory conclusions. Regarding the impact of the “Belt and Road” Initiative on the sovereign debt of countries along the routes, some studies based on synthetic control methods have found that the Initiative significantly reduced debt risk ^[5], while other cross-national panel analyses suggest localized evidence of heterogeneous increases in debt vulnerability ^[6]. Regarding the trade effects of the China-Europe Railway Express, some estimates show export growth of over ten percentage points, while others argue that the effects have been markedly overestimated and that significant trade diversion exists ^[7]. Such divergences are not accidental; they are rooted in deep-seated differences in data availability, identification assumptions, model specifications, and research periods. Regrettably, existing review articles mostly stop at cataloging findings by category and rarely delve into the literature to ask: Do the assumptions behind those seemingly sophisticated identification strategies withstand scrutiny? Do the different conclusions reached by different methods reflect the complexity of the real world, or merely the biases inherent in the methods themselves? The intention of this paper is precisely to fill this gap. We do not aim to produce an encyclopedic review—that would require greater length and a longer time frame. Instead, we adopt a problem-oriented approach, conducting an in-depth dissection of the most representative empirical studies in four core domains: trade, investment, debt, and environment. Each section does three things: sorting out core findings, deconstructing the key assumptions of identification strategies, and pointing out the likely direction of bias arising from methodological choices. On this basis, we focus on discussing three pervasive tensions—the tension between internal and external validity in identification strategies, the gap between partial and general equilibrium, and the misalignment between case-based inference and average effects—and attempt to move from “critique” toward “construction,” proposing directions for future research.

2. Theoretical mechanism evolution from the gravity model to the institutional threshold

The theoretical tools used to explain the economic effects of the Belt and Road Initiative (BRI) have undergone a distinct generational shift over the past decade. The first phase was almost entirely dominated by the gravity model. Researchers incorporated infrastructure quality, transport connectivity indicators, or BRI dummy variables into standard gravity equations, arguing that connectivity reduced bilateral trade costs. The World Bank’s Belt and Road Economics report is a representative work of this approach. Its structural model converted transport time into tariff equivalents, and simulations indicated that the combined effects of improved transport infrastructure, border clearance reform, and tariff preferences could increase exports of corridor economies by approximately 5.9% ^[8]. However, two limitations of this analysis are equally evident: the model

assumes a perfectly competitive market structure and fails to endogenize the political-economic process of infrastructure investment. Although the risk of trade diversion is mentioned, it is not incorporated into a formal welfare analysis framework. In the second phase, the perspective of institutional economics began to intervene on a large scale. Researchers observed that the same infrastructure investment could unleash greater growth dividends in countries with higher institutional quality, while in countries with weak institutions it might fall into a so-called “governance gap”^[9]. This threshold effect implies that the effects of the BRI are not linear but highly dependent on the host country’s rule of law, control of corruption, and government effectiveness. Wang^[10] analyzed the alignment between the initiative and existing international institutions from the perspective of institutional complexity, pointing out that alignment outcomes vary across issue areas, policy adjustment magnitudes, and task divisions. This perspective enriched the analytical dimensions but also introduced new difficulties: institutional quality itself is endogenous, and bidirectional causality may exist between infrastructure construction and institutional improvement, making it difficult for simple threshold regressions to cleanly identify causal effects. In the third phase, global value chain restructuring theory added a dynamic dimension to this issue. Some scholars proposed that China is transitioning from the “world’s factory” to a regional value chain hub, and the stability of intermediate goods supply has become a new source of comparative advantage for Chinese firms. The opening of the China-Europe Railway Express not only reduced transport costs but, more importantly, improved delivery reliability, thereby making it easier for countries along the route to embed themselves in time-sensitive industrial chains such as electronics and machinery^[11]. Zhou *et al.*^[12] found that China’s outward foreign direct investment helps promote digital economy innovation in countries along the route, with the mechanism lying in reduced transaction costs and increased private investment. This perspective is theoretically attractive, but fine-grained verification at the firm level remains insufficient, particularly regarding systematic discussion of how to quantify the stability of intermediate goods supply.

3. Core empirical domains: Focused findings, methods, and reflections

3.1. Heterogeneity cannot be ignored in difference-in-differences and gravity model assessments of trade effects

Empirical research in the trade field has undergone a methodological shift from simple before-and-after comparisons to quasi-experimental designs. Early studies mostly adopted extended gravity models, incorporating dummy variables for BRI countries or infrastructure indices into regressions^[13]. Such approaches easily overlook interference from other contemporaneous policies—for example, the deepening of the ASEAN Free Trade Area or the signing of the China-Australia Free Trade Agreement—which may overlap with the BRI time window and bias coefficient estimates. In recent years, difference-in-differences (DID) has become mainstream. Researchers use the policy timing of the BRI or the opening of China-Europe Railway Express services as an exogenous shock, comparing changes in trade flows between treatment and control groups before and after the policy^[14]. Zhao and Li^[15] used the opening of China-Europe Railway Express as a quasi-natural experiment and found that trade facilitation significantly reduced firms’ energy consumption intensity, with the effect more pronounced among private enterprises and ordinary polluting industries; mechanism tests pointed to technological innovation effects and resource allocation optimization. Mao *et al.*^[16] incorporated a bilateral liner shipping connectivity index into a gravity model and found that maritime connectivity had a significant positive effect on trade, with larger effects for less globalized countries and those with weaker governance. These findings are intuitively plausible in policy terms, but a closer examination of their identification strategies reveals

several methodological concerns worth noting. Tests of the parallel trends assumption are often perfunctory. Many studies merely present mean trend graphs for the two periods before policy implementation rather than conducting strict statistical tests, and even fewer discuss the time heterogeneity of treatment effects—countries that joined the BRI early and those that joined later differ systematically in economic development level, institutional quality, and openness, and such differences themselves affect trade growth. If the division between treatment and control groups does not fully account for this, the DID estimator conflates policy effects with selection effects. Another overlooked issue is the trade diversion effect. World Bank CGE simulations long ago suggested that the BRI might reduce the export shares of non-BRI countries, yet the vast majority of DID studies focus only on changes within the treatment group and ignore negative spillovers to the “control group”^[17]. When a broad-based international cooperation initiative simultaneously changes trade costs across multiple countries, the traditional “non-interference assumption” is almost inevitably violated. In addition, although structural gravity models can handle multilateral resistance terms, they impose extremely high data requirements—detailed inland trade cost data, production substitution elasticity parameters, and sector-level input-output relationships—and currently only a few institutions such as the World Bank can complete structural estimation covering the full sample. The methodological divide between structural and reduced-form models makes it difficult for the conclusions of the two research paths to engage in direct dialogue.

3.2. Investment effect research must reconcile ownership heterogeneity and the boundaries of the synthetic control method

China’s outward foreign direct investment (OFDI) in BRI countries is another focal point of debate. Traditional multinational corporation theory emphasizes ownership, location, and internalization advantages, but China’s outward investment simultaneously exhibits composite features of market-seeking, strategic asset-seeking, and infrastructure-driven motives, making it difficult for any single theory to fully explain it^[18]. More critically, the investment behavior of state-owned enterprises (SOEs) and private enterprises diverges significantly, and this divergence provides a micro-level basis for understanding the heterogeneity of investment effects. Li *et al.*^[19] used case studies to find that the BRI simultaneously generates push and pull effects—competitive pressure, government push, and public opinion push constitute the push, while expanded market opportunities, lower export costs, and improved financing conditions constitute the pull. SOEs and private enterprises differ markedly in identifying opportunity windows: SOEs perform an evident strategic transmission function in energy, transportation, and digital infrastructure, and their investment direction aligns far more closely with five-year plans and diplomatic blueprints than that of private enterprises; private enterprises are more driven by host-country market size, labor costs, and the business environment, and are more active in consumer goods, cross-border e-commerce, and light industry. In terms of causal identification, the synthetic control method (SCM) has been favored because it can construct a refined counterfactual for a single treated country^[20]. For example, case studies on Laos or Kenya often show impressive fit—the paths of the treatment group and synthetic group nearly coincide before policy implementation and diverge significantly afterward. But the fragility of this method also warrants caution. When the number of control group countries is limited, or weights are concentrated in a few countries, the inferential power of synthetic control declines sharply; more troublesome, the ranking and significance judgments in placebo tests often implicitly involve the author’s subjective choices. Many studies exclude countries with poor fit during implementation, and if such exclusions lack transparent rules, publication bias easily arises. In addition, SCM can only answer “the impact on a specific country” and cannot be generalized to an overall average treatment effect, which limits the external validity

of conclusions. BRI investment is not evenly distributed but concentrated in a small number of countries with prominent geostrategic significance, so whether case conclusions based on individual countries can be extended to the entire BRI region is itself a question requiring justification ^[21].

3.3. Debt sustainability research faces identification dilemmas and discursive politics

The “debt trap” is arguably the most politicized issue in BRI academic discussion and thus a typical sample of identification dilemmas. Early policy reports (e.g., Hurley *et al.* ^[22]) pointed out that some BRI countries faced debt distress, and this conclusion was quickly cited widely by the media and international policy circles, forming a simplified narrative of “BRI = debt trap.” But subsequent follow-up research gradually revealed multiple factual biases in this narrative. Blanchard and Acalin ^[23] compared loan interest rates, grace periods, and repayment sources and found that China’s loan interest rates in BRI projects were approximately 4%, lower not only than commercial loan rates but also than the average level of traditional bilateral loans; grace periods were longer, and repayment was often linked to project operating revenues rather than the host country’s general fiscal revenue. The BRI significantly reduced the sovereign debt risk of BRI countries, with the mechanism lying in promoting economic growth and expanding the tax base. The initiative had a greater debt-reduction effect on low- and middle-income country governments, and trade and investment were the main transmission channels. Qiu *et al.* ^[24] also provided direct empirical evidence refuting the “debt trap,” pointing out that active participation in BRI cooperation actually helped strengthen the suppressive effect on debt risk in BRI countries. The 2025 currency conversion and interest rate renegotiation of the Mombasa-Nairobi Railway in Kenya, at the case level, demonstrated the practical flexibility of debt restructuring—the one-way control presupposed by the “trap theory” does not accord with the facts. However, denying the “trap” narrative does not mean debt problems do not exist. The question is how to properly assess debt sustainability. The Ministry of Finance has successively issued two sets of debt sustainability analysis frameworks, respectively for low-income economies and market-access economies, which represents commendable institutional learning. But from the perspective of academic evaluation, the parameter calibration of these frameworks—such as export growth rates, discount rates, and debt thresholds—still involves considerable subjective judgment and lacks systematic comparison with the IMF-World Bank DSA framework. More importantly, the vast majority of empirical studies rely on macro panel data or SCM, and such analyses cannot distinguish the enormous differences in financing terms at the project level. The debt implications of concessional loans and commercial loans are completely different, but publicly available data make it very difficult to obtain loan-by-loan interest rate, maturity, and grace period information. This has kept debate in this field at the discursive level of “whether there is a trap” for a long time, unable to advance to a refined discussion of “under what loan structures debt risk is manageable” ^[25].

3.4. Environmental and social effects manifest as a tug-of-war between scale effects and technological effects

Quantitative research in the environmental field generally observes two opposing forces at work simultaneously. The scale effect brought by economic growth increases carbon emissions, but the technological effect—increased clean energy investment, energy efficiency improvements, and industrial structure upgrading—partially offsets this pressure. Zhao *et al.* ^[26] analyzed embodied carbon transfer in manufacturing and found that carbon emissions in BRI countries gradually became consumption-driven; embodied carbon emissions increased by about 25% during the study period, but net emissions declined, indicating that part of the carbon transfer was borne by China. The policy implication of this finding is subtle: if only production-side carbon emissions are considered,

the redistribution of consumption-side emission responsibility may be overlooked. Assessment of the carbon sink potential of mining area ecological restoration shows that some countries in Southeast Asia and South America have considerable restoration space. Chen *et al.* ^[27] estimated that restoration potential could reach 10.8 g carbon/m²/year, but differences across regions are extremely significant, and the trade-off between restoration costs and emission reduction benefits lacks systematic accounting. On the social effects side, labor risks, land acquisition compensation, and community participation have become focal points. Liu and Deng ^[28] analyzed Southeast Asian countries and showed that differences in labor standards and the strength of labor unions significantly affect the localized operations of Chinese-funded enterprises; purely ex-post compensation can hardly quell conflicts, and some projects have begun to shift toward ex-ante consultation and whole-process participation. Such studies mostly rely on cases and fieldwork and are difficult to subject to large-sample econometric testing, but the mechanistic insights they provide are precisely what large-scale quantitative analysis lacks.

4. Deep methodological reflection: Three tensions and one turn

Although empirical research in the above fields has become increasingly technically sophisticated, it commonly faces three inescapable tensions. The first is the tension between the internal validity and external validity of identification strategies. DID designs need to satisfy the parallel trends assumption, but when anticipated policy effects begin to transmit before implementation—for example, firms already knew about BRI planning before 2013 and positioned themselves in advance, or host-country governments adjusted foreign investment policies based on anticipated information—trend differences between treatment and control groups may conflate anticipation effects with true effects. Event study methods can alleviate this problem to some extent, but the choice of event window, the setting of the reference period, and the construction of confidence bands all introduce new degrees of freedom. More troublingly, studies that fail the parallel trends test are rarely published, which is a form of publication bias. The second is the gap between partial equilibrium and general equilibrium. The vast majority of empirical studies adopt partial equilibrium analysis, assuming other markets remain unchanged, but in reality BRI projects change relative prices, wages, and exchange rates in BRI countries and generate complex feedback effects through third-country markets. Although structural models can theoretically handle these problems, they impose extremely high requirements on computing power and parameter settings. Gao ^[29] found that infrastructure connectivity is an important condition for advancing economic globalization, and that the supply of standards and rules related to infrastructure connectivity can exert greater effects than signing regional trade agreements. This also suggests that institutional coordination and standards alignment in a general equilibrium framework are often ignored by reduced-form estimation, leading to misjudgment of effect magnitudes. The lack of an effective dialogue mechanism between reduced-form and structural estimation is a deep reason for the slow theoretical accumulation in this field ^[30]. The third is the mismatch between case inference and average effects. SCM can construct a refined counterfactual for a specific country but cannot answer “on average” effects; panel regression can estimate average treatment effects but may obscure important heterogeneity. Each method has its strengths, but in practice they are rarely juxtaposed and compared. Facing these three tensions, future research needs to begin with a fundamental turn: from “policy effect identification” to “mechanism deconstruction and conditional analysis.” This means researchers need not insist on answering the overly general question of “whether the BRI has effects,” but should ask: under what conditions do effects appear? Through what mechanisms are they transmitted? Who bears the costs? This turn simultaneously

requires two foundational projects. First, improvement of data infrastructure—establishing a public project-level database for BRI projects, including loan terms, environmental and social assessment reports, and local employment ratios, can significantly enhance the credibility of academic research and policy evaluation. Second, cross-method robustness comparison—letting structural estimation and reduced-form estimation test each other, letting fieldwork and large-sample analysis complement each other, and letting qualitative comparison and quantitative causality jointly approximate the truth. Only in this way can BRI research move from scattered accumulation of empirical evidence toward a knowledge system with theoretical integrative power^[31,32].

5. Frontier issues and the Chinese perspective

BRI research is extending from traditional trade and investment analysis to emerging fields such as digital, green, and security issues. In the Digital Silk Road, the regulatory economics of cross-border e-commerce and cross-border data flows has become a hot topic. China has signed digital cooperation memoranda with dozens of countries and established a Silk Road e-commerce cooperation mechanism, but controversies over data sovereignty, algorithm governance, and blockchain traceability have also increased. Qin and Cao^[33] reviewed the governance dilemmas of cross-border data flows among BRI countries and pointed out clear gaps at three levels: legislative norms, enforcement practice, and coordination mechanisms. The EU Carbon Border Adjustment Mechanism (CBAM) entered its transition period in 2023 and is planned for full implementation in 2026, which will significantly raise compliance costs for Chinese exports to Europe and force BRI projects to accelerate the construction of carbon emission accounting systems. Yang *et al.*^[34] analyzed the renewable energy export trade pattern and showed that China's position in the BRI renewable energy trade network has shifted from "intermediary" to "center," but export markets remain concentrated in ASEAN, and product technological sophistication is relatively low. The Global South is undergoing profound internal differentiation. Indonesia's "Global Maritime Fulcrum" strategy and Turkey's "Middle Corridor" plan exhibit development-oriented state characteristics similar to China's, but they both compete with China and leave room for third-party market cooperation. China-Japan and China-Europe infrastructure projects in Africa and Southeast Asia are gradually forming a complex pattern of "competitive-cooperative embeddedness." Geopolitical conflicts and friend-shoring are reshaping the supply chain resilience of the BRI; some multinational enterprises have implemented "China+1" strategies, creating substitution pressure on existing value chains while also creating new participation opportunities for Southeast and South Asian countries. How to incorporate political risk, terrorism threats, and climate vulnerability into investment assessment frameworks is a core topic for the next stage of risk research^[35,36]. From the Chinese perspective, future work should shift from feasibility assessment of single projects to country-level systemic risk assessment. Pressure for rule alignment is rising—high-standard agreements such as CPTPP and IPEF require proactive shaping rather than passive adaptation on issues including labor, environment, and SOE transparency. China's role in the BRI is shifting from infrastructure provider to rule co-builder, which requires academic research to provide more refined institutional design and governance experience support^[37,38].

6. Conclusion and research prospects

6.1. Main conclusions

Reviewing the past decade of BRI economics research, a clear turn has occurred: scholars are no longer satisfied with answering "whether there are effects" but instead ask under what conditions effects emerge, through what

mechanisms they are transmitted, and who bears the costs. Current evidence generally supports the positive role of the BRI in trade creation, industrialization promotion, and value chain upgrading, but it also suggests that these effects depend heavily on host-country institutional quality, absorptive capacity, and project governance models. The debt trap narrative lacks systematic empirical support, but debt transparency and sustainability assessment frameworks remain incomplete. At the methodological level, DID, SCM, and structural estimation each have their applicable boundaries and fragilities. The most urgent future need is not to develop more complex new methods but to enable results from different methods on the same research question to be juxtaposed and compared, thereby assessing the robustness of conclusions. Cao and Li ^[39] found that the BRI promoted economic growth by stimulating consumption, infrastructure construction, and employment in BRI countries, but the role of Chinese labor support was not obvious, suggesting that not all transmission channels are equally important. Zhao *et al.* ^[40] confirmed at the micro-enterprise level that the BRI can promote total factor productivity improvement in enterprises of BRI countries, through mechanisms including rule coordination, infrastructure connectivity, and diversified financial empowerment. These latest findings from World Economy Studies indicate that high-quality micro data and multi-level mechanism testing are becoming new trends.

6.2. Research prospects

At the starting point of the next decade, the most pressing need in this field is sincere cross-method dialogue—allowing structural estimation and reduced-form estimation to test each other, fieldwork and large-sample analysis to complement each other, and qualitative comparison and quantitative causality to jointly approximate the truth. Only in this way can Belt and Road research move from scattered accumulation of empirical evidence toward a knowledge system with theoretical integrative power, and provide reliable academic support for China’s participation in global economic and trade governance.

Funding

National Social Science Fund Youth Project “Research on the Mechanism and Policy of Digital Economy Driving the Green Transformation of China’s Manufacturing Industry under the Background of High-Quality Development” (22CJY024); the Anhui Provincial Social Science Planning Project “Research on the Mechanism, Effects, and Pathways of High-Quality Development in the China (Anhui) Pilot Free Trade Zone” (AHSKY2023D112); and the Anhui Provincial University Outstanding Youth Research Project “Optimization Pathways for Empowering Green Transformation of Agricultural Production through New Quality Productive Forces” (2024AH030072); Anqing Normal University School-Level Key Project “Research on the Interactive Development of China-Europe Railway Express and Trade Digitalization Construction of Countries along the ‘Belt and Road’” (SK202211ZD).

Disclosure statement

The authors declare no conflict of interest.

References

- [1] Xi J, 2017, Join Hands to Advance the Belt and Road Initiative—Speech at the Opening Ceremony of the Belt and

- Road Forum for International Cooperation. Gazette of the State Council of the People's Republic of China, (15): 6–10.
- [2] National Development and Reform Commission, Ministry of Foreign Affairs, Ministry of Commerce, 2015, Vision and Actions on Jointly Building the Silk Road Economic Belt and the 21st-Century Maritime Silk Road. International Communication, (4): 4–9.
 - [3] Liu W, et al., 2017, Research on the Belt and Road Strategy, Beijing: The Commercial Press, 23–56.
 - [4] Lu F, Li Y, Yang Y, 2015, The Belt and Road and Infrastructure Connectivity. International Economic Review, (3): 28–43.
 - [5] Li Y, 2022, Research on the Impact of the Belt and Road Initiative on Sovereign Debt Risk of Countries Along the Route: An Analysis Based on Synthetic Control Method and Public Risk Theory. South China Finance, (3): 51–62.
 - [6] Yang Q, Wang Q, 2021, The Impact of the Belt and Road Initiative on Government Debt of Countries Along the Route. Public Finance Research, (2): 111–129.
 - [7] Zhang H, Jiang F, 2020, Research on the Motivation and Path of Europe's Integration into the Belt and Road Construction. Intertrade, (10): 69–79.
 - [8] World Bank, 2019, Belt and Road Economics: Opportunities and Risks of Transport Corridors, Washington DC, World Bank, 87–124.
 - [9] Zhang Y, 2019, Institutional Quality and the Cooperation Effects of the Belt and Road Initiative. World Economics and Politics, (6): 4–25.
 - [10] Wang M, 2021, Alignment between the Belt and Road Initiative and Existing International Institutions: From the Perspective of Institutional Complexity. Contemporary Asia-Pacific Studies, (6): 48–77.
 - [11] Liu Z, Chen L, 2018, Reconstruction of Global Value Chains and Belt and Road Production Capacity Cooperation. Academic Monthly, 50(6): 52–63.
 - [12] Zhou R, Hong X, Lin X, 2022, China's Outward Direct Investment and Digital Economy Innovation in the Belt and Road Initiative. Journal of Shanxi University of Finance and Economics, 44(6): 70–83.
 - [13] Sheng B, Guo T, 2017, Trade Effects of the Belt and Road Initiative: An Empirical Study Based on the Gravity Model. Nankai Journal (Philosophy, Literature and Social Science Edition), (4): 56–67.
 - [14] Sun C, Zhang N, Liu Y, 2017, The Belt and Road Initiative and China's Trade Growth with Countries Along the Route. International Economics and Trade Research, 33(8): 58–73.
 - [15] Zhao G, Li J, 2024, Research on the Impact of Trade Facilitation on Enterprise Energy Consumption Intensity: A Quasi-Natural Experiment Based on China-Europe Railway Express under the Belt and Road Initiative. Journal of Industrial Technological Economics, 43(12): 112–122.
 - [16] Mao Y, Ye L, Li S, 2025, Maritime Connectivity of the Belt and Road Initiative and Trade Growth of Partner Countries. Intertrade, (2): 50–62.
 - [17] Xu H, Xia J, 2025, Jointly Building the Belt and Road and Optimizing Trade Competition-Complementarity Relations. Journal of Hunan University (Social Sciences), 39(4): 56–67.
 - [18] Pei C, Fan Y, 2020, Theoretical Explanations of Chinese Enterprises' Outward Investment and the Belt and Road Practice. Economic Research Journal, 55(2): 4–19.
 - [19] Li J, Gan J, Yang X, 2019, How Does the Belt and Road Initiative Affect the Transformation and Upgrading of Chinese Enterprises. South China Journal of Economics, (4): 1–22.
 - [20] Liu Y, Hu L, Synthetic Control Method Assessment of Investment Risks in Countries Along the Belt and Road. China Industrial Economics, 2019, (7): 87–105.
 - [21] Jiang G, 2020, The Belt and Road Initiative and the Location Choice of Chinese Enterprises' Outward Investment. The Journal of World Economy, 43(8): 79–102.

- [22] Hurley J, Morris S, Portelance G, 2019, Examining the Debt Implications of the Belt and Road Initiative from a Policy Perspective. Center for Global Development Policy Paper.
- [23] Blanchard O, Acalin J, 2019, China's Belt and Road Initiative: How Much Debt is Being Incurred? PIIE Policy Brief.
- [24] Qiu Y, Pan P, Zhang L, 2021, Has the "China Solution" Really Laid a Debt Trap?: Empirical Evidence from the Belt and Road Initiative. *World Economy Studies*, (7): 120–134 + 137.
- [25] Xu Q, Chen Y, 2021, Debt Sustainability Analysis of the Belt and Road Initiative: A Critical Review. *International Economic Review*, (3): 78–97.
- [26] Zhao S, Chen C, Guo C, et al., 2026, Analysis of Embodied Carbon Transfer and Driving Factors in Manufacturing under the Belt and Road Initiative. *China Environmental Science*, 46(2): 1125–1138.
- [27] Chen F, Xia Y, Zou M, et al., 2025, Assessment of Carbon Sink Potential for Ecological Restoration of Mining Areas in Belt and Road Partner Countries. *Journal of China Coal Society*, 50(6): 2789–2801.
- [28] Liu J, Deng X, 2022, Research on Labor Risks of Investment in Southeast Asian Countries Along the Belt and Road. *Journal of Sichuan University (Philosophy and Social Science Edition)*, (1): 184–192.
- [29] Gao L, 2023, Research on the Model of the Belt and Road Initiative Promoting Economic Globalization. *World Economy Studies*, (6): 14–25 + 134.
- [30] Wang Y, Zhang J, 2022, Methodological Divergence between Structural Estimation and Reduced-Form Estimation in Trade Policy Evaluation. *Economic Perspectives*, (5): 98–114.
- [31] Chen Q, 2022, Causal Inference in Econometrics: Debates and Consensus. *The Journal of Quantitative & Technological Economics*, 39(7): 5–25.
- [32] Zhang C, 2023, Endogeneity and External Validity in Policy Evaluation: Taking Belt and Road Research as an Example. *Economic Research Journal*, 58(4): 16–32.
- [33] Qin J, Cao M, 2025, China's Approach to Risk Governance of Cross-Border Data Flows under the Belt and Road Initiative. *Southwest Finance*, (4): 44–56.
- [34] Yang Q, Zhang B, Yu Y, 2025, Evolution of China's Renewable Energy Export Trade Pattern: Evidence from Belt and Road Partner Countries. *Intertrade*, (4): 75–85.
- [35] Huang Y, Dai X, Li L, 2025, Risk Analysis of China's Overseas Railway Project Construction under the Belt and Road Initiative: From the Perspective of Institutional Distance. *Development Research*, (1): 25–33.
- [36] Zhang M, Wang Z, 2024, Political Risk and Investment Security in Countries Along the Belt and Road. *Studies of International Finance*, (3): 55–65.
- [37] Li X, 2024, High-Standard Construction and Rule Alignment of the Belt and Road Initiative. *World Economics and Politics*, (8): 2–24.
- [38] Wang Y, Ma X, 2025, From "Going Out" to "Going In": The Institutional Logic of the Evolution of China's Outward Direct Investment Rules. *Management World*, 41(1): 88–106.
- [39] Cao X, Li S, 2021, The Impact of the Belt and Road Initiative on Economic Growth of Countries Along the Route and China's Role. *World Economy Studies*, (10): 13–24 + 134.
- [40] Zhao Y, Zhao X, Ma X, et al., 2025, The Belt and Road Initiative Promotes the Upgrading of Micro Market Entities in Partner Countries: Distinctive Evidence Based on Total Factor Productivity Improvement of Local Enterprises. *World Economy Studies*, (10): 62–75 + 136.

Publisher's note

Bio-Byword Scientific Publishing remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.