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The Credit-Constraint Paradox of the Belt and Road Initiative: Debt, Institutions, and Structural Change

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Abstract: This paper examines the dual effects of infrastructure financing under the Belt and Road Initiative (BRI) and develops the concept of a "credit-constraint paradox." While BRI lending can relax sovereign credit constraints and accelerate infrastructure investment in the short run, it may tighten constraints over time if it fails to generate sustained productivity gains and foreign-exchange earnings. We identified three mechanisms underlying this paradox: macro-financial pressure and debt overhang, structural change and premature deindustrialization, and political economy dynamics associated with institutional weakening. Drawing on comparative case studies of Pakistan, Malaysia, and Kazakhstan, we show that outcomes depend critically on state capacity, particularly in project appraisal, contract management, and debt governance. The findings suggest that the key issue is not whether countries borrow, but how they borrow and govern investment.

Keywords: Belt and Road Initiative (BRI); Credit constraints; Sovereign debt; Infrastructure finance; State capacity

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1. Introduction

Development economists often stress that limited access to credit can slow growth in low-income countries. When households and firms cannot borrow, they invest less in education, equipment, and new businesses. A similar constraint exists at the national level: many developing-country governments face tight borrowing limits because they have weak fiscal capacity and are treated as risky borrowers. This makes it difficult to finance major infrastructure projects that could support long-run development.

China's Belt and Road Initiative (BRI) has become one of the largest sources of external infrastructure finance for developing countries. In theory, BRI lending can relax sovereign credit constraints by funding ports, roads, railways, and power plants that domestic budgets cannot easily cover. At the same time, critics argue that some BRI projects increase debt vulnerability and leave countries with heavier repayment burdens [1,2]. This leads to our central question: **Does BRI lending support development, or does it deepen debt risks?**

We argue that BRI finance can produce a **credit-constraint paradox**. In the short run, large inflows of capital can ease financing constraints and speed up infrastructure delivery. Over time, however, borrowing

can tighten constraints if it raises debt risks and fails to generate sustained productivity and foreign-exchange earnings. We explain this paradox through three channels as follows:

(1) Rapid debt accumulation can create **debt overhang**, where repayment burdens reduce fiscal space and discourage investment [3];

(2) Infrastructure does not automatically generate structural change; projects may deliver connectivity without building competitive tradable sectors, contributing to **premature deindustrialization** when local spillovers are limited [4];

(3) When projects are negotiated under weak oversight, large contracts can intensify corruption and weaken institutions, reducing the state's ability to manage debt and public investment [5,6].

To evaluate these mechanisms, we use a comparative case approach and focus on three countries that illustrate different pathways. **Pakistan** highlights how infrastructure-led borrowing can become macro-financially constraining. **Malaysia** provides a contrast case where stronger institutions enabled contract review and renegotiation. **Kazakhstan** helps assess whether connectivity investments translated into broader industrial upgrading rather than mainly improving transit capacity.

2. Framework and hypotheses: The "credit-constraint paradox" in sovereign finance

Our framework starts from a simple idea in development economics: credit is useful, but only if it can be turned into productive investment. Much of the micro-level literature shows that easing household or firm credit constraints does not automatically create long-run transformation for everyone [7,8]. Some borrowers use credit to expand and grow, while others do not see lasting changes because other constraints (skills, markets, weak institutions) remain binding. We take this insight to the sovereign level and treat BRI lending as a large macro-level credit infusion to governments.

2.1. The paradox: Short-run relief, long-run risk

We argue that BRI finance can follow a dual path. In the short run, it can relax sovereign financing constraints by funding infrastructure that recipient countries cannot easily finance through domestic revenue or regular international markets. Early project launches may also improve market confidence for a time, because external funding can be interpreted as a signal that investment is flowing into the country.

However, this improvement is not guaranteed to last. If borrowed funds do not raise productivity and foreign-exchange earning capacity in a meaningful way, the initial relief can turn into a tighter constraint. In other words, the country moves from "can't borrow enough to invest" to "borrowed too much to invest well." This is what we call the credit-constraint paradox.

2.2. Three channels that can generate the paradox

When infrastructure finance fails to translate into sustained productive capacity, long-run risks appear through three mechanisms.

2.2.1. Channel 1: Macro-financial pressure and debt overhang

Large infrastructure projects often require imported machinery, materials, and foreign contractors. That means capital inflows are paired with sizable outflows, which can strain foreign exchange reserves. At the same time, rapid debt accumulation can worsen credit ratings and raise borrowing costs. This combination can create a

classic debt overhang problem: when repayment burdens loom large, governments and private investors may hold back on new productive investment because expected future gains are diverted to servicing debt.

2.2.2. Channel 2: Economic structure and premature deindustrialization

Infrastructure can support industrial growth, but it does not automatically create a stronger tradable sector. When resources and policy attention concentrate on construction and upstream projects, manufacturing and other tradable sectors may receive less support. In addition, large capital inflows can push up the real exchange rate, making exports less competitive. This is one pathway toward premature deindustrialization, where manufacturing weakens before a country becomes rich.

2.2.3. Channel 3: Political economy and institutional weakening

Large infrastructure deals can be politically attractive because they are visible and can be launched quickly. However, when contracts are opaque and oversight is weak, projects are more vulnerable to cost inflation, elite capture, and corruption. Easy access to external funding can also reduce pressure for domestic reform and encourage short-term decision-making. Over time, this can weaken governance and reduce the state's ability to manage both debt and public investment effectively.

2.3. Observable implications

To keep the argument testable, each channel implies a set of observable patterns as follows:

(1) H1 (macro-financial): If projects do not expand export capacity, we expect rising external financing stress, reserve pressure, worsening risk perceptions, and reduced room for productive public spending;

(2) H2 (economic structure): If infrastructure spending is not paired with industrial upgrading, we expect limited spillovers into manufacturing and tradable-sector growth, even if transport capacity improves;

(3) H3 (institutions): Where oversight is weak, we expect signs of governance strain, less transparent contracting, politicized project choice, and higher vulnerability to fiscal "shortcuts."

2.4. The key moderator: State capacity

A central part of our framework is that BRI outcomes are not uniform. Whether the paradox emerges depends heavily on state capacity, the ability to evaluate projects, negotiate terms, enforce rules during implementation, and manage debt risks. High-capacity states are more likely to direct finance toward productive uses and avoid a debt spiral. Low-capacity states are more likely to experience a "borrow–build–crisis" pattern, where debt rises faster than productive capacity and institutions weaken over time.

3. What is distinctive about BRI lending

To understand why BRI financing can lead to very different outcomes across countries, we need to be clear about what makes BRI lending different from both traditional aid and ordinary private finance. In our view, BRI credit operates through a hybrid model: it uses commercial-style lending instruments, but it is also shaped by China's strategic and industrial priorities [9,10].

We highlight three features that matter for the mechanisms above as follows:

(1) State-guided commercial logic: A large share of BRI finance comes from Chinese policy banks and state-owned actors that lend at or near market rates, and loans are often collateralized. This setup can impose

repayment discipline, but it also means projects are not "free money" and can add to sovereign risk when debt rises;

(2) Project bundling and financial circularity: Many BRI projects are delivered as a package in which Chinese firms are involved in financing, design, construction, and equipment supply. As a result, a significant part of the spending can flow back to Chinese suppliers rather than staying in the host economy. This can limit technology transfer and local firm participation, which matters for our structural-change channel (H2);

(3) Project-level risk containment: Chinese lenders often favor projects with predictable cash flows (for example in energy/resources) or strategic value (ports and transport hubs), and they structure loans to protect repayment. This can reduce lender risk, but it may also tilt investment toward certain sectors rather than broad-based industrial upgrading, reinforcing the risks described in H1 and H2.

Taken together, this model can speed up infrastructure delivery, but it can also shape debt dynamics and spillovers in ways that make the credit-constraint paradox more likely in low-capacity settings.

4. Method and case selection

This paper uses a mechanism-based comparative case approach. Our goal is not to estimate a single "average treatment effect" of BRI lending across all countries. Instead, we ask whether the patterns described above appear in real-world cases, and how these outcomes differ with state capacity.

4.1. Case selection logic

We select cases to vary along two dimensions as follows:

(1) Exposure to large BRI-linked projects and debt-financed infrastructure;

(2) Differences in institutional capacity and policy space.

Pakistan is included because it illustrates how infrastructure-led borrowing can become intertwined with external financing stress. **Malaysia** is included as a contrast case where stronger domestic institutions enabled contract review and renegotiation. **Kazakhstan** is included to evaluate whether connectivity investments translated into broader industrial upgrading, rather than mainly improving transit capacity.

4.2. What counts as evidence

For each case, we look for evidence that maps onto our three channels as outlined:

(1) Macro-financial channel (H1): Signs of external financing stress and debt pressure, such as reserve constraints, rising repayment burdens, and reduced fiscal space for productive spending;

(2) Structural channel (H2): Whether infrastructure investments are linked to gains in tradable-sector competitiveness, local spillovers, and sustained productivity growth, rather than only short-run construction activity;

(3) Institutional channel (H3): Whether projects are shaped by transparent processes and effective oversight, or whether they show signs of politicized project selection, opacity, and vulnerability to elite capture.

We rely on a combination of secondary academic research, policy reports, and widely documented case facts. The strength of this approach is that it allows us to trace mechanisms across settings; its limitation is that some key contract terms and financial details remain difficult to observe, which we address in the conclusion.

5. Evidence from comparative cases

This section evaluates our framework using three cases that map onto our hypotheses. Pakistan illustrates the macro-financial channel (H1). Malaysia shows how higher state capacity can reduce risk through review and renegotiation (H3 and the state-capacity moderator). Kazakhstan is used to assess whether BRI-linked connectivity investments translate into structural transformation rather than only improved transit capacity (H2).

5.1. Pakistan: Macro-financial stress and debt overhang (H1)

Pakistan shows how BRI finance can ease constraints at first but tighten them later. Under the China–Pakistan Economic Corridor (CPEC), investment supported new energy and transport infrastructure, which helped reduce power shortages and eased bottlenecks in the near term.

The longer-run pressure appears in the form of fixed external payment obligations. In particular, "take-or-pay" power contracts created commitments that had to be met regardless of short-run domestic conditions. At the same time, large infrastructure projects rely heavily on imported equipment and services, so the initial inflow of finance is paired with sizable foreign-exchange outflows. In our article, external debt is described as having doubled between 2015 and 2022, while reserves fell to critically low levels; Pakistan then entered an IMF program in 2023, and austerity reduced private credit access. Together, these features fit the debt-overhang logic: repayment burdens and external constraints rise faster than export capacity, making it harder to borrow and invest productively.

This supports H1 as the key mechanism is not "borrowing is always bad," but that borrowing becomes constraining when it generates rigid FX outflows without a matching expansion in FX earnings.

5.2. Malaysia: Governance and renegotiation capacity (state capacity / H3)

Malaysia is a useful contrast case because it shows how outcomes can differ when domestic institutions can scrutinize and adjust large projects. In our article, the key turning point comes after 2018, when Malaysia reviewed the East Coast Rail Link (ECRL) through a rule-based political process and renegotiated the project downward (in cost and/or scope). This signaled fiscal discipline and reduced the risk that the project would compound debt stress.

What matters for our argument is the process as much as the result, where a credible review mechanism increases bargaining power, helps filter projects by economic returns rather than political visibility, and makes it harder for large contracts to bypass oversight. This reduces the likelihood of "fiscal illusion," where easy external credit delays reforms or masks long-run budget risks.

This supports H3 as Malaysia suggests that stronger governance can prevent large infrastructure finance from turning into long-run vulnerability, by enabling renegotiation, transparency, and course correction before a crisis.

5.3. Kazakhstan: Connectivity versus structural transformation (H2)

Kazakhstan helps assess the structural channel because it raises a common development question: is improved connectivity enough to change the production structure? In our article, Kazakhstan's BRI-linked investments focus on transport corridors and logistics hubs designed to reduce trade costs and position the country as a transit route across Eurasia.

Our framework predicts that infrastructure contributes to development when it generates spillovers into productive, tradable activity, not only construction activity or transit throughput. We therefore treat indicators

such as expanded corridor-based business activity, growth in non-resource exports, and sustained strengthening of non-resource sectors as key signs of structural gains. If those spillovers remain limited, the main effect may be improved transit capacity (valuable, but narrower), rather than broad industrial upgrading, consistent with the H2 risk story.

This supports H2 as the case highlights the gap between "building infrastructure" and "building competitiveness." Connectivity is a necessary input, but without complementary policies and local capability building, it may not deliver structural transformation.

5.4. Takeaway across cases

Across the three cases, the evidence is consistent with our "credit-constraint paradox." Pakistan illustrates how debt-financed infrastructure can become macro-financially constraining when repayment obligations and FX outflows grow faster than export capacity. Malaysia shows that stronger institutions can reshape outcomes through review and renegotiation. Kazakhstan highlights that infrastructure can improve connectivity without guaranteeing industrial upgrading. Overall, the decisive factor is not access to credit itself, but whether the recipient state can manage debt, govern projects, and convert infrastructure into productivity gains and tradable-sector spillovers.

6. Conclusion

This paper examined whether lending under the Belt and Road Initiative primarily advances development or exacerbates debt vulnerabilities. The findings suggest a conditional outcome. In the short term, BRI financing can ease sovereign credit constraints by enabling governments to invest in infrastructure projects that would otherwise be difficult to fund through domestic resources. However, this initial relief may evolve into a credit-constraint paradox if borrowing expands more rapidly than a country's capacity to achieve productivity gains and generate foreign-exchange earnings. Under such circumstances, rising debt-servicing obligations, pressure on foreign reserves, and heightened risk perceptions can erode fiscal space and ultimately tighten credit conditions over the longer term. The cases are consistent with this argument. Pakistan illustrates how debt-financed infrastructure can become macro-financially constraining when external payment obligations are rigid and foreign-exchange pressures rise. Malaysia shows that stronger institutions can reshape outcomes: review and renegotiation can reduce fiscal risks before they escalate. Kazakhstan highlights a different challenge: infrastructure may improve connectivity without delivering structural transformation if spillovers into tradable sectors and industrial capability remain limited. Together, these cases support our broader claim that state capacity, project appraisal, contract management, and debt strategy, is central to whether BRI lending becomes an opportunity or a constraint. These findings imply that the key issue is not simply whether to borrow, but how to borrow and how to govern investment. Recipient countries can reduce long-run vulnerability by strengthening project evaluation, procurement transparency, and debt management, and by linking infrastructure to policies that build tradable-sector competitiveness. For lenders and contractors, clearer disclosure and project designs that increase local participation can improve sustainability and reduce political backlash. Our main limitation is that this is a mechanism-based case comparison rather than a causal estimate, and some contract details are not fully observable. Future work could combine this framework with systematic cross-country data on terms, repayment schedules, and local spillovers.

Disclosure statement

The authors declare no conflict of interest.

References

[1] Brautigam D, 2020, A Critical Look at Chinese "Debt-Trap Diplomacy": The Rise of a Meme. Area Development and Policy, 5(1): 1–14.

[2] Hurley J, Morris S, Portelance G, 2018, Examining the Debt Implications of the Belt and Road Initiative from a Policy Perspective (CGD Policy Paper 121), Center for Global Development.

[3] Krugman P, 1988, Financing versus Forgiving a Debt Overhang. Journal of Development Economics, 29(3): 253–268.

[4] Rodrik D, 2016, Premature Deindustrialization. Journal of Economic Growth, 21(1): 1–33.

[5] Acemoglu D, Johnson S, Robinson J, 2001, The Colonial Origins of Comparative Development: An Empirical Investigation. American Economic Review, 91(5): 1369–1401.

[6] Acemoglu D, Robinson J, 2012, Why Nations Fail: The Origins of Power, Prosperity, and Poverty, Crown Business.

[7] Balboni C, Bandiera O, Burgess R, et al., 2022, Why do People Stay Poor? The Quarterly Journal of Economics, 137(2): 785–844.

[8] Duflo E, Banerjee A, Glennerster R, et al., 2013, The Miracle of Microfinance? Evidence from a Randomized Evaluation. American Economic Journal: Applied Economics, 5(1): 1–28.

[9] Dreher A, Fuchs A, Parks B, et al., 2022, Banking on Beijing: The Aims and Impacts of China's Overseas Development Program, Cambridge University Press.

[10] Horn S, Reinhart C, Trebesch C, 2021, China's Overseas Lending. Journal of International Economics, 2021(133): 103539.