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THE SHIMOMURA INVERSION

Growth Before Institutions, and the Digital Monetary Consequence

ABSTRACT

In 1960, Osamu Shimomura provided the intellectual architecture for Japan's Income Doubling Plan under Prime Minister Hayato Ikeda. His thesis was not simply that growth was achievable. It was that directed investment, channelled through institutions capable of allocating and monitoring it, would generate the savings and productivity dynamics that orthodox development theory assumed must precede investment. Japan's GNP doubled by 1967, three years ahead of the plan's ten-year target. What followed was the export of the growth outcome as a transferable model without its institutional prerequisites. The economies that adopted income doubling logic across Southeast Asia, South Asia, and Sub-Saharan Africa between 1965 and 2010 replicated the investment mechanism and the growth targets. They did not replicate the Meiji-era administrative apparatus, the post-occupation land reform, the main bank monitoring architecture, or the savings culture that made Shimomura's causal chain function. This paper terms the resulting structural condition the Shimomura Inversion: the presence of growth outcomes in the absence of the institutional depth that makes those outcomes durable. The stablecoin payment layer is now being deployed into precisely these institutionally deficient economies, in some cases at adoption rates exceeding those observed in advanced economies. This paper argues that the mechanism of deployment mirrors the original inversion. The stablecoin layer is adopted as a functional instrument without the property

rights infrastructure, regulatory enforcement capacity, and consumer protection architecture that would make its adoption durable rather than extractive.

INTRODUCTION

Osamu Shimomura did not argue that Japan should grow first and build institutions later. He argued that Japan already had what it needed to grow, and that growth, if it came at the rate his investment model projected, would compound the institutional capacity already present. The distinction is precise, and it is the one that has been consistently lost in the decades of development policy that invoked his model.

Japan in 1960 had a civil service apparatus with continuous institutional memory stretching to the Meiji reforms of 1868. It had a legal system that had been reformed, tested, and rebuilt through occupation. It had completed the most thorough land redistribution in its history between 1946 and 1950, converting approximately 4.7 million tenant farm households into owner-farmers and distributing roughly 2 million hectares of previously tenanted land (Dore, 1959). It had a domestic savings rate approaching 20 percent of household income. It had the Ministry of International Trade and Industry, established in 1949, with genuine industrial policy authority and a technically trained senior staff. It had, in the main bank system that underpinned the *keiretsu*, a credit monitoring architecture that was informal by Western legal standards but functionally rigorous.

Shimomura's investment-first thesis was not a model of institution-free growth. It was a model of growth that could be attempted because the institutions were already there.

What followed is the subject of this paper. The income doubling outcome, Japan's GNP doubling in seven years, became a template. The template traveled. Development economists, the World Bank, and postcolonial governments read the growth outcome and attempted to reproduce it. The institutional substrate did not travel with it; either because it was invisible to the analysts who carried the model, or because it was too slow to build to be compatible with the political timelines of the governments that needed it. The result, in economy after economy, was growth before institutions: rapid capital accumulation running ahead of the property rights frameworks necessary to protect it, credit expansion

preceding the monitoring capacity necessary to discipline it, and urbanization outpacing the administrative systems needed to manage it.

This paper terms this structural condition the Shimomura Inversion. The original logic moves from institutional depth to investment to growth. The inverted logic moves from growth targets to growth outcomes, leaving the institutional deficit in place beneath the surface. That deficit is now the landscape into which the stablecoin payment layer is being deployed.

I. THE SHIMOMURA THESIS AND ITS INSTITUTIONAL PREREQUISITES

Osamu Shimomura's core analytical contribution was a reversal of the classical development finance orthodoxy. The Harrod-Domar model, which dominated development economics through the 1950s, treated savings as the binding constraint on growth. Capital accumulation required prior savings. Investment was derivative of the savings rate. The policy implication was a savings-first development sequence: accumulate domestic capital, then deploy it.

Shimomura inverted this. His 1958 analysis of Japan's postwar growth, refined into the intellectual foundation of the Income Doubling Plan by 1960, argued that investment itself generates the income from which savings are drawn (Shimomura, 1958; Nakamura, 1981). The causal arrow runs from investment to growth to savings, not the reverse. If the institutional infrastructure exists to direct investment toward productive use, growth will generate the savings necessary to sustain it. The constraint is not savings availability. The constraint is investment allocation quality.

This is not a model without preconditions. It requires, at minimum, three things: an administrative apparatus capable of directing investment toward activities with high social returns; a credit monitoring system capable of distinguishing productive from speculative use; and a property rights framework capable of distributing the gains from growth broadly enough to sustain the domestic savings rate that the model requires to remain self-reinforcing.

Japan had all three. The Ministry of International Trade and Industry coordinated sectoral investment priorities with a level of analytical rigor that most developing nation ministries of finance have not replicated. The main bank system, in which a lead bank held equity stakes in borrower firms and maintained board representation, created monitoring incentives that arm's-length bond markets do not produce. Land reform under the Allied occupation, completed by 1950, had distributed productive assets at a scale that no development program implemented since has approached.

None of these conditions were rapid to construct. The Meiji civil service reform began in 1868. The legal codification that enabled the main bank system drew on German commercial law traditions imported in the 1890s. The land reform was imposed by external authority and completed under occupation conditions that permitted the displacement of existing landholding interests at a speed that democratic politics rarely permits.

When Shimomura wrote in 1958, he was not designing an institution-building program. He was reading an economy that had already built the institutions and asking how fast it could now grow. The answer was faster than anyone had assumed. The error that followed was in concluding that the growth outcome was the transferable element.

II. THE TEMPLATE AS RECEIVED

The World Bank's 1993 report, *The East Asian Miracle*, examined eight high-growth economies: Japan, South Korea, Taiwan, Hong Kong, Singapore, Indonesia, Malaysia, and Thailand, and attempted to extract a transferable model. The report's analytical conclusions were contested from the moment of publication (Krugman, 1994; Rodrik, 1994), but its policy influence was significant. It told developing governments that high-growth development was achievable through a combination of export orientation, macroeconomic stability, and selective industrial policy. It did not say that the institutional substrate required was decades in the making.

South Korea is the closest case of genuine institutional replication. The Park Chung-hee government, beginning in 1962, constructed a development state that mirrored Japan's

administrative logic more closely than any other. The Economic Planning Board, modeled on MITI, coordinated industrial investment with a technically trained staff drawn from the same elite examination tradition. The *chaebol*, criticized for their concentration and opacity, served a function analogous to Japan's *keiretsu*: organizing capital allocation around entities large enough to be monitored and close enough to government to be disciplined. South Korea's GDP per capita rose from approximately $82 in 1961 to $12,257 by 1995, a compound annual growth rate approaching 16 percent across three decades (World Bank, 2024). It achieved this with institutional depth that was genuinely constructed, at social and political cost that the growth narrative consistently underweights.

Indonesia is the more instructive case. President Suharto's New Order, beginning in 1966, adopted growth-first development with explicit reference to the Japanese and Korean models. GDP per capita rose from approximately $50 in 1967 to $1,118 in 1997, a twentyfold increase in nominal terms over thirty years (World Bank, 2024). The growth was real. The institutional depth was not. Land tenure remained insecure. The legal system remained subordinate to political authority. Credit allocation was mediated through political connection rather than productivity assessment. The main bank analogue, the conglomerate structures built around Suharto-connected families, did not monitor borrowers. It protected them.

When the Asian financial crisis arrived in 1997, the difference between South Korea and Indonesia became legible. South Korea's institutional depth meant the crisis, though severe, was recoverable through restructuring. Indonesia's institutional deficit meant the crisis did not merely damage the economy; it delegitimised the entire state apparatus. The IMF's GDP contraction estimate for Indonesia in 1998 was 13.1 percent (IMF, 1999). The political consequences outlasted the economic ones by a decade.

Sub-Saharan Africa's encounter with the income doubling template is more diffuse but structurally consistent. The World Bank and IMF's structural adjustment programs of the 1980s and 1990s imposed the macroeconomic conditions associated with East Asian growth, specifically fiscal discipline, trade liberalization, and privatization, without creating the institutional conditions that made those macroeconomic policies functional in their original context. The result was fiscal discipline in states without a tax administration capable of deploying it, privatization in states without a commercial legal

system capable of enforcing private contracts, and trade liberalization in economies without the productive capacity to compete.

The consistent pattern across these cases is not that growth was absent. Growth occurred. The consistent pattern is that growth ran ahead of the institutional capacity to make it durable.

III. MEASURING THE INSTITUTIONAL DEFICIT

The institutional deficit is not a theoretical construct. It is observable in specific, quantifiable gaps between economic output and institutional capacity.

The World Bank's Worldwide Governance Indicators, covering approximately 215 economies, measure six dimensions of institutional quality: voice and accountability, political stability, government effectiveness, regulatory quality, rule of law, and control of corruption (Kaufmann, Kraay, and Mastruzzi, 2010). The 2022 data shows the gap between growth outcomes and institutional quality with precision.

Vietnam's GDP per capita grew from approximately $98 in 1990 to $4,163 in 2022, a compound growth rate of approximately 9 percent across three decades. Vietnam's Rule of Law percentile score in 2022 was 42.3. Its Control of Corruption score was 39.9. The growth is real. The institutional depth that would make that growth durable, including the capacity to allow a Vietnamese household to hold an enforceable claim against a corporate borrower, to title rural land with confidence that the title would be honored in a decade, or to access judicial remedy for financial fraud, remains limited.

Nigeria's GDP grew from approximately $24 billion in 1990 to $477 billion in 2022 in nominal terms, making it the largest economy in sub-Saharan Africa (World Bank, 2024). Its Rule of Law percentile score in 2022 was 12.0. Its Control of Corruption score was 10.6. The distributional consequence of that gap, between significant aggregate economic output and near-absence of institutional enforcement capacity, is visible in the poverty data: 40.1 percent of Nigeria's population lived below the national poverty line in 2019, according to the National Bureau of Statistics, even as aggregate output continued to expand.

Ethiopia presents a variant of the same pattern at speed. GDP per capita grew from $168 in 2004 to $1,020 in 2022, a compound annual growth rate of approximately 10 percent (World Bank, 2024). Formal property rights for rural land remain constitutionally vested in the state; households hold use rights that can be withdrawn by administrative decision. The Rule of Law percentile for 2022 was 17.0.

The gap in each of these cases is not a gap between intention and execution. It is a structural feature of economies that grew before the institutions that protect growth were built. Shimomura's causal chain requires institutional depth as a precondition. Where that depth was absent, growth generated asset accumulation that could not be secured, credit expansion that could not be monitored, and income gains that could not be protected.

Hernando de Soto's estimate in *The Mystery of Capital* (2000), that approximately $9.3 trillion in assets held by the poor in developing economies could not be leveraged because the holders lacked formal title, is a measure of the institutional deficit in property rights alone. That figure is now twenty-five years old. The structural condition it describes has not been resolved; in several major developing economies it has worsened as urbanization and population growth have outpaced cadastral systems built for agricultural settlement.

IV. DIGITAL MONETARY INFRASTRUCTURE AND THE DEFICIT

The stablecoin payment layer is arriving into this landscape.

The mechanism of arrival follows a consistent pattern. In economies with volatile domestic currencies, stablecoins denominated in US dollars provide a store of value and medium of exchange that domestic monetary institutions cannot match. The inflation rate in Argentina averaged 211 percent in 2023 (INDEC, 2024). The naira lost approximately 70 percent of its official exchange value between June 2023 and December 2023 following the Central Bank of Nigeria's managed float adjustment (CBN, 2024). The Ethiopian birr lost approximately 47 percent of its value against the dollar between 2020 and 2023 through a series of official devaluations (World Bank, 2024). In each of these environments, a

dollar-denominated stablecoin offers something that domestic monetary infrastructure demonstrably cannot: monetary stability.

Adoption follows. Chainalysis estimated Nigeria's stablecoin transaction volume at approximately $56.7 billion in 2023, the highest on-chain stablecoin volume in sub-Saharan Africa and placing Nigeria among the top ten globally by raw transaction volume (Chainalysis, 2024). Argentina's crypto and stablecoin holdings represent one of the largest per-capita informal dollar substitution patterns outside the formal banking system, continuing a dynamic that de Soto's analysis of informal capital prefigures.

The adoption is rational at the individual level. A Nigerian household holding naira in a bank account in June 2023 had lost 70 percent of its purchasing power in dollar terms by December 2023. A household holding USDT had not.

The structural consequence operates at a different level.

The stablecoin layer does not build institutions. It routes around them. In economies with functional property rights and regulatory enforcement, routing around legacy payment infrastructure is a technical upgrade. In economies where the institutional deficit is the primary structural risk, routing around institutional infrastructure removes the limited protection that exists without creating a replacement.

The specific mechanism runs as follows. In a jurisdiction with weak enforcement capacity, a consumer using a bank account has limited protection; but the limited protection that exists, namely deposit insurance where available, fraud remediation, and AML and KYC requirements that constrain counterparty risk, is located in the regulated banking system. When the same consumer moves to a stablecoin wallet, they exit that system. The stablecoin issuer, incorporated in the United States under the GENIUS Act's regulatory framework where it applies, or in the Cayman Islands or British Virgin Islands where it does not, has no obligation to the Nigerian or Ethiopian consumer that any Nigerian or Ethiopian court can enforce.

The historical precedent for this mechanism is not obscure. The penetration of sterling-denominated credit instruments into the Ottoman Empire during the nineteenth century is one instance. The preference for instruments governed by English law, settled

in London, and denominated in sterling, created a financial infrastructure that extracted value from the Ottoman economy without creating the institutional preconditions for Ottoman economic sovereignty. The Ottoman Public Debt Administration, established in 1881 to manage debt service to European creditors, is the institutional endpoint of that process: a foreign-managed fiscal authority operating inside a nominally sovereign state because the state had adopted financial instruments whose enforcement architecture was located elsewhere.

The stablecoin layer does not require an Ottoman Public Debt Administration to achieve the same structural outcome. The enforcement architecture is already located elsewhere, embedded in the smart contract and the issuer's terms of service. The Nigerian consumer whose wallet is frozen by the issuer for a reason that the issuer's terms of service permit has no recourse in any jurisdiction they can practically access.

Douglass North's framework is useful here. North distinguishes between formal institutions, such as laws, property rights, and regulatory frameworks, and informal institutions, such as norms, conventions, and social sanctions (North, 1990). In economies with strong formal institutions, financial innovation can route around legacy infrastructure while remaining bounded by the formal institutional environment. In economies where formal institutions are weak, the informal institutions that constitute an alternative enforcement mechanism are built around the existing financial infrastructure, not the new one. When the new infrastructure arrives without formal institutional backing, it operates in a space where neither formal nor informal enforcement mechanisms apply with adequate force.

This is not a description of what the stablecoin layer might eventually become. It is a description of its current functional architecture in the economies where adoption is fastest.

V. THE INVERSION REPEATED

Shimomura's original insight was that investment directed through institutions capable of channelling it could generate growth faster than classical development economics

assumed. The income doubling outcome was the evidence. The error that followed was the abstraction of the growth outcome from the institutional conditions that produced it.

The stablecoin payment layer is being positioned, by its advocates and implicitly by the pace of its deployment, as a monetary infrastructure upgrade for developing economies. The implicit argument is that faster, cheaper, more stable money will generate economic outcomes that existing monetary infrastructure cannot produce. This is not wrong in the narrow technical sense. Dollar-denominated stablecoin transactions are faster and cheaper than correspondent banking transfers. They provide monetary stability that domestic currencies in high-inflation environments cannot match.

The error is the same error that turned Shimomura's thesis into a development template. The stablecoin layer produces observable monetary outcomes: lower transaction costs, currency stability, financial access for the previously unbanked. These outcomes are real in the same way that Indonesia's twentyfold GDP growth between 1967 and 1997 was real. The institutional conditions that would make those outcomes durable are not being built alongside the infrastructure that produces them.

The World Bank's Global Findex data estimated that approximately 1.4 billion adults globally remained unbanked as of 2021, with the highest concentrations in Sub-Saharan Africa, South Asia, and the MENA region (World Bank, 2022). The stablecoin layer's advocates have positioned it as the solution to this financial exclusion. The mechanism proposed is that access to a dollar-denominated stablecoin wallet replaces the need for a regulated bank account. This is technically accurate and institutionally consequential. A bank account in a weak-institution environment provides limited protection. A stablecoin wallet in the same environment provides none that a local court can enforce.

The fastest growth in stablecoin adoption is occurring in precisely the economies where the institutional deficit is most acute. This is not coincidental. Monetary instability in high-inflation environments is not separable from the weak fiscal and administrative institutions that produce it. A monetary instrument that routes around the consequence without addressing the cause does not resolve the structural condition; it inserts a new extraction architecture into the existing one.

The Shimomura Inversion, as this paper uses the term, is not an accusation. It is a structural description. Japan grew because it had institutions capable of sustaining growth. The income doubling template was adopted because the growth outcome was visible and the institutional substrate was not. The stablecoin template is being adopted because the monetary outcome, comprising stability, low-cost transfer, and financial access, is visible, and the institutional requirements for making that outcome durable are not.

The parallel is not an analogy. It is a recurrence of the same structural error at a different moment in the sequence.

CONCLUSION

The institutional deficit that defines the landscape into which the stablecoin layer is arriving did not emerge from a single policy error. It accumulated across decades of development policy that prioritised growth outcomes over institutional depth, attracted by the visible evidence of what Shimomura's model had produced in Japan, and by the political convenience of a growth target that did not require the slow, costly work of building property rights systems, judicial capacity, and administrative competence from scratch.

The stablecoin layer does not address that deficit. It operates independently of it; which in weak-institution environments is the same as operating against it. The consumer who exits the regulated banking system for a stablecoin wallet has not gained access to stronger institutional protection. They have traded a weak claim in a local enforcement framework for no enforceable claim in any framework they can practically access.

The economies where this transition is occurring fastest are not random. Nigeria, Argentina, Ethiopia, Vietnam, Pakistan: each is an economy where the institutional deficit is measurable and the monetary instability driving stablecoin adoption is a direct consequence of that deficit. A monetary instrument that resolves the symptom while the structural cause remains intact does not create stability. It relocates the risk while displacing the limited protective architecture that the existing system, however deficient, had in place.

Shimomura understood that his model required what Japan had already built. The analysts who exported the model did not ask whether the destination economies had built the same things. The sequence that followed is recorded. The deployment of the stablecoin layer into the world's highest-institutional-deficit economies is now producing its first chapter of that same record, and the institutional conditions that would make the outcome different are, in most of these economies, not further along than they were when the income doubling template arrived.

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