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Aligning Institutions and Industrial Strategy: A Transformation Framework for Georgia's European Future

Dr. Bahman Moghimi, PhD, DBA
Professor, Academic Staff at the School of Business and Administrative Studies, The University of Georgia, Tbilisi, Georgia

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Abstract

Georgia's industrial challenge is not the absence of strategies, but the absence of a credible framework that can turn institutional reform into firm upgrading, export capacity, and lasting competitiveness. This paper develops GIPTM-7, a seven-pillar model for industrial transformation in a small open economy pursuing Euro-Atlantic integration. The model is derived through a systematic literature review, thematic synthesis, Georgia-specific contextual adaptation, and qualitative scenario analysis. Its seven pillars are Glassy Institutions and the rule of law; entrepreneurial and private-sector capacity; strategic state policy and industrial finance; knowledge and human capital; infrastructure and connectivity; sustainability and industrial resilience; and global integration and EU alignment. The scenarios show that industrial transformation is not linear. Institutional credibility affects the success of patient capital, while entrepreneurial and private-sector capacity determines whether international integration leads to greater economic complexity or only higher trade volume. The paper concludes with policy and implementation priorities for strengthening productive capacity and EU-aligned industrial governance.

Keywords: Georgia; industrial policy; industrial transformation; institutional quality; patient capital; SMEs; human capital; European Union alignment

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1. Introduction

Georgia has implemented major market and governance reforms over the last three decades. Yet these reforms have not produced a diversified industrial base or a stable foundation for higher-value growth. Industrial development remains narrow, fragmented, and vulnerable to regional economic and political pressures.

Research on small open economies shows that market openness alone is rarely sufficient for sustained industrial transformation. Credible institutions, strategic state coordination, firm-level upgrading, and integration into higher-value production networks are also needed (Rodrik, 2004; Aiginger & Rodrik, 2020). In Georgia, these elements have often developed separately. Institutional reform has not been matched by comparable progress in productive capacity, infrastructure, skills, and long-term industrial planning.

This study introduces the Georgia Industrial Policy Transformation Model (GIPTM-7), a seven-pillar conceptual framework developed around Georgia's institutional conditions, economic structure, and European orientation. It brings together Glassy Institutions and the rule of law, entrepreneurship and private-sector capacity, strategic state policy and industrial finance, human capital, infrastructure, sustainability, and global integration. The framework is intended to explain how these areas can support long-term industrial development when treated as parts of one system.

1.1. Background and Motivation

Georgia's reforms since the early 2000s improved administrative efficiency, digital governance, and the general business environment. However, institutional efficiency does not by itself generate structural change or industrial upgrading (Acemoglu & Robinson, 2012). The economy remains concentrated in relatively low-productivity activities, while many SMEs are small, undercapitalized, and technologically limited.

These weaknesses are common in post-transition economies, but Georgia's small domestic market and geopolitical exposure make them more difficult to overcome. Liberalization created important foundations for growth, yet it did not produce a coordinated strategy for building domestic industrial capabilities. This gap provides the main motivation for the study.

1.2. Industrial Development Challenges in Georgia

Georgia faces several connected industrial constraints. Institutional uncertainty and uneven enforcement discourage long-term investment. Many firms lack finance, technology, managerial capacity, and strong links to supply chains. Skills development, vocational education, university research, and

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industry needs remain poorly aligned. Energy security, logistics, and digital infrastructure also continue to affect competitiveness.

Environmental requirements add another layer of pressure. As EU standards become stricter, Georgian producers must improve energy efficiency and production methods to retain access to important markets. At the same time, the country's participation in global value chains remains limited despite its open economy and strategic location. These are not separate problems. Together, they point to a wider lack of coordination between institutions, firms, finance, knowledge systems, infrastructure, and external partners.

1.3. Euro-Atlantic Orientation and Strategic Imperatives

Georgia's constitutionally stated European aspiration creates opportunities as well as obligations. EU integration requires regulatory convergence, stronger governance, environmental adjustment, and closer alignment between industrial development, human capital, and infrastructure. The external anchor of European integration can support institutional improvement and competitiveness in transition economies (Estrin & Uvalic, 2016).

Regulatory alignment alone, however, will not create industrial depth. Georgia must also strengthen domestic firms, improve its position in European value chains, and make better economic use of its role in the Middle Corridor. Its European path therefore needs to be connected to a broader industrial development strategy.

1.4. Research Aim and Significance

The aim of this study is to develop a seven-pillar industrial transformation framework suited to Georgia's institutional, economic, and geopolitical conditions. GIPTM-7 is significant because it brings the main requirements of industrial development into one Georgia-specific model rather than examining them as separate policy areas.

The framework contributes in four related ways. It offers an integrated explanation of Georgia's industrial constraints, adapts established industrial policy ideas to a small post-transition economy, connects industrial development with the country's European direction, and provides a basis for assessing reform priorities and policy coordination. It is not presented as a fixed blueprint, but as a structured framework for analysing long-term industrial development.

1.5. Structure of the Paper

Section 2 reviews the theoretical and comparative literature and presents the research gap and rationale for GIPTM-7. Section 3 explains the

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methodology, including the systematic-review process, thematic synthesis, contextual adaptation, and scenario analysis. Section 4 presents the conceptual framework, while Section 5 explains the seven pillars and their system logic. Section 6 applies scenario-based simulation. Section 7 discusses policy implications and implementation priorities. Section 8 concludes with the study's contributions, limitations, and directions for future research.

2. Literature Review

Industrial policy research has moved beyond the old opposition between state intervention and market liberalization. Current work gives greater attention to institutional quality, state capability, firm-level strength, infrastructure, knowledge systems, sustainability, and integration into international markets. These areas are especially relevant to Georgia because industrial development depends on how well they work together.

2.1. Institutional Quality, Governance & Development

Institutional quality shapes investment, entrepreneurship, and long-term development. Acemoglu and Robinson (2012) link economic progress to inclusive institutions that protect property rights, uphold the rule of law, and limit elite capture. Industrial policy research adds that institutions must also be capable of coordination and implementation. Yülek (2018) argues that credible institutions reduce transaction costs, enforce standards, and support long-term economic priorities. For Georgia, administrative reform alone is therefore insufficient. Industrial upgrading also requires judicial credibility, policy consistency, transparency, and reliable enforcement.

2.2. Modern Industrial Policy Theory

Modern industrial policy is less concerned with replacing markets than with correcting structural weaknesses and supporting learning, investment, and technological upgrading. Aiginger and Rodrik (2020) describe it as transition-oriented and closely connected to institutional development. Rodrik's (2004) idea of embedded autonomy also stresses that governments must work with firms while remaining independent enough to discipline ineffective support. Yülek (2018b) similarly emphasizes strategic foresight, coordinated investment, and selective intervention. In Georgia, this points to a policy approach that goes beyond general deregulation and links state action to clear industrial priorities.

2.3. Developmental State vs. Open Market Approaches

Market openness can improve competition, investment, and access to international markets, but it does not by itself create strong domestic industries. Evidence from Central and Eastern Europe shows that deeper

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integration may still coexist with low-value production, weak local capabilities, and dependence on foreign capital (Nölke & Vliegenthart, 2009). Georgia has followed a largely liberal path based on deregulation and an improved business environment, yet industrial capability-building has remained limited. Current research therefore supports a balanced model that combines market openness with state capability and strong governance (Aiginger & Rodrik, 2020). This balance forms part of the conceptual basis of GIPTM-7.

2.4. Role of Private Sector, Finance & Patient Capital

Industrial transformation requires finance that can support long-term investment, technological risk, and delayed returns. Development banks and public financial institutions have played this role in many late-industrializing economies (Mazzucato & Penna, 2016). Yülek (2018) describes this as patient capital, which is especially important where commercial banks prefer short-term and collateral-based lending. Finance alone, however, is not enough. Firms also need absorptive capacity, managerial competence, cluster participation, and access to supply chains. This is why GIPTM-7 separates Entrepreneurial and Private Sector Capacity from Strategic State Policy and Industrial Finance while treating them as closely connected pillars.

2.5. Human Capital, Knowledge Systems & Innovation

Human capital supports productivity, technological absorption, and industrial learning. Finland's experience shows how long-term investment in education, research, innovation, and technology policy can support the movement toward a knowledge-intensive economy (OECD, 2023). The wider literature also points to the importance of vocational education, university–industry cooperation, research commercialization, diaspora knowledge, and public technology platforms. Georgia remains weak in several of these areas. Human capital should therefore be treated as an industrial capability rather than only as part of social or education policy.

2.6. Infrastructure, Connectivity & Spatial Industrialization

Transport, logistics, energy, and digital systems influence where firms locate, how much they produce, and whether they can reach external markets. Research on Eurasian connectivity shows that trade corridors generate limited value without coordinated logistics, multimodal transport, and compatible standards (OECD, 2023). Georgia's position in the Middle Corridor creates opportunities, but geography alone does not guarantee industrial gains. These depend on reliable energy, efficient customs, regional coordination, and infrastructure that connects firms to domestic and international supply chains. Infrastructure is therefore an active part of industrial policy.

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2.7. Sustainability, Green Transition & Industrial Resilience

Environmental standards increasingly affect industrial competitiveness. The European Green Deal, CBAM, and wider climate commitments are changing production costs, export conditions, and investment priorities (European Commission, 2019; Leipprand & Flachsland, 2018). For Georgia, closer relations with the EU will require greater attention to energy efficiency, renewable energy, cleaner production, climate resilience, and regulatory alignment. Sustainability is therefore not separate from industrial development. It influences market access, long-term costs, and the resilience of firms, which justifies its position as a distinct pillar in GIPTM-7.

2.8. Small Open Economies: Lessons from Estonia, Lithuania, Finland, and Poland

Estonia, Lithuania, Finland, and Poland followed different development paths, but their experiences show several common lessons. Estonia demonstrates the value of digital governance and European integration, while also showing that openness does not automatically create deeper industrial capability. Lithuania's progress in exports and modernization still depends on stronger research and higher-value production. Finland shows the long-term value of investment in skills and innovation, and Poland illustrates both the benefits of EU integration and the risks of regional inequality and foreign-capital dependence (OECD, 2023). Together, these cases support coordinated industrial strategies rather than isolated reforms.

2.9. Research Gap and Rationale for GIPTM-7

The literature on industrial policy, institutional quality, innovation systems, and economic development offers important insights into the foundations of structural transformation. Studies on small open economies further demonstrate the importance of coordinated institutions, productive capabilities, human capital, infrastructure, and international integration. However, when considered in the Georgian context, these contributions remain fragmented. Existing research does not provide an integrated conceptual framework capable of capturing Georgia's institutional constraints, industrial development needs, and long-term strategic ambitions.

Research on Georgia has examined institutional reform, SME development, investment promotion, export performance, and sectoral modernization. Likewise, broader industrial policy theories have emphasized embedded autonomy, capability formation, patient capital, and innovation ecosystems (Rodrik, 2004; Johnson, 1982; Amsden, 1989; Mazzucato & Penna, 2016; Schienstock, 2004; Yülek, 2018). While these perspectives offer valuable foundations, they are typically addressed as separate domains and cannot be directly applied without considering Georgia's post-Soviet

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institutional legacy, small economic scale, geopolitical position, demographic challenges, and European integration agenda.

A similar fragmentation is evident at the policy level. Existing national strategies related to competitiveness, investment, education, sustainability, and SME development demonstrate strong reformist intent, yet they often operate as parallel policy streams rather than components of a coherent industrial-development agenda. Comparative evidence from Finland, Estonia, Lithuania, and Poland suggests that successful small economies align industrial policy, human capital formation, infrastructure development, and international integration through coordinated institutional arrangements. Georgia's policy architecture has yet to achieve this level of strategic coherence.

These academic and policy-level gaps point to the need for an integrated framework that connects institutional credibility with industrial capability-building, links entrepreneurship and private-sector development to strategic state finance and patient capital, aligns human capital and infrastructure with productive transformation, and positions sustainability and global integration as long-term competitive imperatives. Such an approach must recognize that these domains are structurally interdependent rather than isolated policy concerns.

The absence of this coherence risks limiting productive investment, weakening institutional and policy coordination, and reducing the developmental gains of international integration. Industrial transformation in Georgia therefore requires more than isolated reforms or short-term policy interventions. It requires a framework capable of organizing long-term priorities across institutions, markets, and productive sectors.

GIPTM-7 is proposed as a response to these conceptual and policy challenges. Building on established scholarship in industrial policy and economic development, the framework adapts these insights to Georgia's institutional environment, economic structure, and strategic priorities. Rather than prescribing a fixed policy blueprint, GIPTM-7 offers an integrated and context-sensitive approach for understanding how institutions, industrial finance, entrepreneurship, human capital, infrastructure, sustainability, and global integration interact to shape long-term industrial transformation. In doing so, it provides a structured basis for analyzing development pathways and supporting more coherent industrial policy decisions aligned with Georgia's European future.

3. Methodology

The method has four stages. First, a systematic literature review identifies relevant work on institutions, industrial policy, human capital, infrastructure, sustainability, and small open economies. Second, thematic

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synthesis groups the recurring findings into the seven GIPTM-7 pillars. Third, grounded-theory-inspired analysis adapts these pillars to Georgia's institutional and structural conditions. Finally, scenario analysis examines how the framework responds to different political and economic pathways. This approach is consistent with conceptual theory-building in policy research (Petticrew & Roberts, 2006; Corbin & Strauss, 2015).

Comparative evidence from Finland, Estonia, Lithuania, and Poland helps distinguish realistic development paths from more ambitious ones. Because Georgia lacks the long time series and detailed industrial data required for advanced econometric modelling, the study relies on cross-country evidence and structured qualitative analysis (Glaser & Strauss, 1967; Corbin & Strauss, 2015).

3.1. Systematic Literature Review Process

The evidence reviewed in Sections 1 and 2 is not a narrative overview; rather, it follows the core logic of systematic reviews as outlined by Petticrew and Roberts (2006), including transparent search procedures, explicit inclusion criteria, and structured extraction of key findings.

The review process proceeded in four stages:

1. Framing the review questions
    - What institutional, industrial policy, and capability-building arrangements underpin successful structural change in small open economies?
    - How do these arrangements manifest in countries that share characteristics with Georgia, such as size, openness, transition history, and EU orientation?
    - What has been written specifically about Georgia's industrial, institutional, and connectivity constraints?
2. Search strategy
    - Scholarly databases included Scopus, Web of Science, and major publisher platforms such as Springer, Elsevier, and Taylor & Francis, together with OECD and World Bank publications.
    - Keywords were combined in structured blocks, including "industrial policy" AND "small open economy," "institutional quality" AND "structural transformation," and "Georgia" AND "industrial development."
    - Grey literature included OECD, World Bank, European Union, and regional policy reports, together with Georgian academic and policy outputs.

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3. Inclusion criteria
    - Sources were required to address at least one of the seven pillars of GIPTM-7 and focus on small open or transition economies, or specifically on Georgia.
    - Included materials comprised peer-reviewed articles, scholarly books, and high-quality institutional reports.
    - Publications were drawn primarily from the last two to three decades, while seminal works were retained when conceptually foundational (e.g., Johnson, 1982; Amsden, 1989; Glaser & Strauss, 1967).
4. Data extraction
    - For each source, key constructs, mechanisms, and contextual conditions were coded into a structured evidence matrix covering institutional requirements, financial structures, industrial instruments, human capital mechanisms, infrastructure, sustainability, and integration channels.

This procedure ensures that the conceptual framework is grounded in an explicit and replicable review process rather than a selective or anecdotal reading of the literature. To enhance transparency, the review was organized in a PRISMA-informed manner, although it is not presented as a full PRISMA systematic review. Sources were identified through academic databases, publisher platforms, institutional repositories, and official documents, then screened for relevance to Georgia, post-transition development, industrial policy, institutional quality, long-term finance, human capital, infrastructure, sustainability, and EU alignment. Duplicates, weakly sourced materials, and publications with limited relevance to the seven analytical domains were excluded.

The empirical and contextual grounding of the study relies entirely on secondary data and documents. Academic sources include peer-reviewed research on industrial policy, institutions, innovation systems, infrastructure, sustainability, and small open economies. International institutional sources include OECD, World Bank, and European Commission publications addressing innovation policy, connectivity, structural transformation, the Green Deal, CBAM, and EU enlargement. Georgian sources include national development strategies, industrial and SME policies, EU association and candidacy documents, materials from relevant ministries and agencies, and academic and policy studies addressing competitiveness, governance, and connectivity. Wherever possible, findings from grey literature were interpreted alongside peer-reviewed studies to reduce institutional or donor-related bias.

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3.2. Thematic Synthesis for Pillar Derivation

To translate a large and heterogeneous body of literature into a usable analytical framework, this study employs thematic analysis and synthesis in the spirit of Braun and Clarke's (2006) structured approach to identifying patterns across qualitative data.

The synthesis process followed three stages. First, recurring themes—including rule of law, anti-corruption, development banks, SME capabilities, vocational education and training systems, export clusters, green transition, and EU regulatory convergence—were identified and coded across the reviewed literature. Second, these themes were grouped into higher-order analytical clusters representing institutions, state policy and finance, private-sector capacity, human capital, infrastructure, sustainability, and global integration. Alternative cluster structures were considered and discarded when they failed to capture the critical dimensions of Georgia's context. Third, the seven pillars of GIPTM-7 were refined through iterative comparison with Georgia's institutional, economic, and policy environment.

To support consistency throughout this process, a structured evidence matrix recorded the principal concepts, institutional conditions, policy mechanisms, and industrial capabilities identified across sources. This thematic synthesis provides the analytical justification for why GIPTM-7 comprises seven distinct yet interconnected pillars.

3.3. Grounded Theory for Contextual Adaptation

While the seven pillars emerge from global and comparative literature, their adaptation to Georgia follows a logic inspired by grounded theory. Glaser and Strauss (1967), and later Corbin and Strauss (2015), emphasize building theory through iterative comparison rather than imposing pre-existing categories.

In this study, grounded theory is not applied in its classical interview-based form. Instead, the research adopts its core methodological principles. Literature-derived mechanisms are compared with Georgia's institutional realities, including development institutions, policy constraints, and strategic priorities. Georgian-specific characteristics—including institutional legacies, political economy considerations, demographic and skills structures, infrastructure gaps, and EU candidacy commitments—inform the contextual adaptation of each pillar. Through iterative refinement, the wording and content of the framework are adjusted to reflect what is institutionally present, what remains underdeveloped, and what is structurally feasible. In this sense, global theory provides the scaffold, while grounded contextual analysis adapts it to Georgia's specific circumstances.

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3.4. Scenario-Based Simulation

Given the absence of detailed quantitative models, this study adopts a scenario-based simulation approach to explore how GIPTM-7 performs under alternative futures. This approach is consistent with the use of scenarios as tools for strategic thinking under conditions of uncertainty (Schoemaker, 1995).

The analysis proceeds through four stages: identifying critical uncertainties related to EU integration, geopolitical stability, long-term finance, and domestic reform commitments; constructing three core scenarios representing accelerated Euro-Atlantic convergence, diversified trade integration, and reform stagnation; mapping the implications of each scenario for the seven pillars of GIPTM-7; and conducting policy sensitivity analysis to distinguish no-regret reforms from scenario-dependent strategies.

Rather than generating forecasts, scenario analysis is used to stress-test the conceptual framework and identify potential leverage points and constraints relevant to Georgia's industrial transformation.

3.5. From Evidence to Findings: Derivation of the Seven Pillars

The seven pillars were derived by combining the literature review, thematic synthesis, contextual adaptation, and scenario analysis. Recurring themes—including institutional credibility, long-term finance, firm upgrading, human capital, infrastructure, sustainability, and global integration—were grouped and compared with Georgia’s conditions. Scenario analysis then clarified how the pillars interact under different development paths. The final structure therefore reflects both the literature and Georgia’s practical constraints.

3.6. Limitations of the Study

This research employs a conceptual and scenario-based design, which naturally carries certain limitations while remaining appropriate for the study's aims. Because the paper does not rely on primary quantitative surveys or econometric estimation, it does not attempt to measure exact elasticities or predict numerical outcomes. Instead, it focuses on identifying the structural relationships and dynamics that shape Georgia's industrial trajectory.

The analysis also depends on the availability and quality of existing policy documents, institutional data, and comparative evidence. Where Georgian data are incomplete or fragmented, the study interprets conditions through triangulation with regional patterns and established theoretical insights. This approach maintains validity while acknowledging that fuller empirical precision requires future data improvements.

Scenario-based simulations are inherently qualitative. Their purpose is to stress-test the GIPTM-7 framework, identify leverage points, and explore

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plausible futures rather than generate forecasts. Given Georgia's evolving political and geopolitical environment, some elements of the model may require recalibration as new information and institutional developments emerge.

Despite these limitations, the chosen methodology is well suited to developing a comprehensive and context-specific framework for industrial upgrading. Its reliance on systematic literature review, thematic synthesis, grounded contextual reasoning, and structured scenario logic is consistent with recognized standards for conceptual and policy-oriented research.

Future research may extend this framework by operationalizing the seven pillars as measurable constructs and empirically testing their relationships using firm-level surveys, national datasets, panel data, or structural equation modelling. Such studies would provide quantitative evidence to further assess and refine the relationships proposed by GIPTM-7.

For clarity, Table 1 summarizes the overall methodological process adopted in this study and illustrates how the literature review, thematic synthesis, contextual adaptation, and scenario analysis were integrated to develop the GIPTM-7 framework.

Table 1: Summary of the methodological process used to develop the GIPTM-7 framework

Stage	Purpose	Main Activities	Output
Systematic literature review	Identify relevant theories and evidence	Search, screening, selection, and review of academic and institutional sources	Conceptual evidence base
Thematic synthesis	Identify recurring concepts across the previous studies	Structured evidence matrix, iterative comparison, theme development	Initial analytical themes
Contextual adaptation	Adapt global evidence to Georgia's context	Comparison with Georgia's institutional, economic, and policy environment	Seven GIPTM-7 pillars
Scenario analysis	Assess the model under alternative futures	Qualitative scenario construction and comparative analysis	Policy implications and implementation roadmap

4. Conceptual Framework Overview

GIPTM-7 treats industrial transformation as a coordinated process. For a small open economy such as Georgia, progress depends on the interaction of institutions, firms, finance, knowledge, infrastructure, sustainability, and international integration. Market forces alone cannot build all these capabilities, while state intervention has limited value without credible institutions and a capable private sector (Aiginger & Rodrik, 2020; Yülek, 2018a). The framework therefore consists of seven connected pillars:

1. Glassy Institutions & Rule of Law
2. Entrepreneurial & Private Sector Capacity
3. Strategic State Policy & Industrial Finance
4. Knowledge & Human Capital Systems

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5. Infrastructure & Connectivity
6. Sustainability & Industrial Resilience
7. Global Integration & EU Alignment

The framework explains why these seven areas matter and how their interaction shapes Georgia's industrial development.

4.1. Logic Behind the Multi-Pillar Architecture

The GIPTM-7 framework was developed through two complementary methodological steps:

(1) thematic synthesis of global and comparative literature, and
(2) grounded adaptation to Georgia's context.

The resulting structure reflects three organizing principles:

(a) Each pillar represents a distinct domain of capability

A pillar is included only if it:

- is empirically shown to influence industrial upgrading in comparable economies;
- corresponds to a domain where Georgia faces a binding constraint;
- is analytically separable from other domains (e.g., institutions ≠ state policy ≠ private sector).

This ensures that the model avoids redundancy. For instance, institutions (pillar 1) focus on rule of law and anti-corruption, whereas state policy and industrial finance (pillar 3) capture intentional state action and patient capital mechanisms-two academically and practically distinct domains.

(b) The pillars collectively exhaust the determinants of transformation

The seven pillars together cover:

- foundational governance conditions,
- directional state capabilities,
- firm-level and entrepreneurial capacity,
- human capital and knowledge formation,
- hard and digital infrastructure,
- sustainability transitions and resilience,
- integration into global and European value chains.

This "collectively exhaustive" design ensures that no critical dimension of Georgia's industrialization roadmap is missing, while avoiding excessive fragmentation.

(c) The model reflects the needs of a small open, transition economy

Georgian specificity shapes the model in three ways:

1. *High institutional sensitivity* - reforms succeed or fail depending on clarity, transparency, and credibility ("transparent institutions").

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2. *Dependence on external anchors* - Euro-Atlantic alignment shapes rules, incentives, and long-term industrial positioning.
3. *Capability constraints* - human capital, firm sophistication, and infrastructure gaps represent structural bottlenecks that require coordinated solutions.

Thus, the model is not a generic emerging-economy model; it is calibrated to Georgia's political economy, scale, and development trajectory.

4.2. Interdependence of Internal and External Dimensions

A central idea behind GIPTM-7 is that Georgia's industrial development cannot be understood only through domestic reforms. The country's geography, security environment, energy dependence, trade structure, diaspora networks, and European aspirations all shape its economic direction and policy choices.

This relationship operates through three connected channels.

(1) External pressures shape internal reforms

Georgia's EU-oriented path increases pressure for stronger institutions, judicial credibility, competition standards, and environmental compliance. As a result, many domestic reforms-especially in governance and industrial finance-are increasingly influenced by external economic and regulatory expectations.

(2) Domestic capabilities shape integration outcomes

At the same time, deeper integration with European and regional markets depends on Georgia's own internal strengths. Firms must be able to upgrade technologically, infrastructure must support efficient logistics, and the workforce must meet changing skill requirements. Without these conditions, international integration produces trade exposure without meaningful industrial upgrading.

(3) Internal and external dynamics reinforce one another

As institutions become more credible, investor confidence tends to improve. Higher-quality investment can strengthen firms, expand productive capacity, and improve Georgia's position within regional value chains. In turn, stronger international integration creates additional pressure for institutional improvement and industrial modernization.

For this reason, the GIPTM-7 framework treats internal reforms and external integration as closely connected processes and integrated policy areas.

4.3. Transformation Pathway Logic

The pathway embedded in GIPTM-7 is structured around the idea that industrial development progresses through *a sequence of capability formation and upgrading*, not spontaneous market emergence. The pathway logic draws

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from classic structuralist and skills-base theories (Amsden, 1989; Johnson, 1982) and is adapted to Georgia's scale, openness, and institutional setting. The pathway proceeds in four stages:

Stage 1 - Foundational Credibility and Coherence

Industrialization requires:

- transparent and predictable institutions,
- coordinated state strategy,
- basic financial instruments for long-term industrial investment.

Without this foundation, later-stage interventions (cluster development, innovation ecosystems) cannot produce sustained upgrading.

Stage 2 - Capability Formation

Once foundational credibility is established, the focus shifts to enhancing:

- firm-level sophistication,
- entrepreneurial ecosystems,
- skills and human capital,
- applied research and knowledge networks.

These capabilities enable firms to shift from survival to productivity growth.

Stage 3 - Enabling Conditions

Infrastructure and sustainability transitions reinforce strategic formation:

- energy security, digital backbone, and logistics integration reduce transaction costs;
- green industrial adaptation reduces long-term risk exposure and aligns with EU markets.

Here, industrial policy becomes spatial, technological, and environmental simultaneously.

Stage 4 - Diversified Global Integration

With capabilities and enabling conditions in place, Georgia can reposition itself within:

- European value chains,
- regional trade networks,
- logistics corridors,
- partner-specific industrial cooperation arrangements.

In this stage, global integration is not the starting point (as often assumed), but the *outcome* of accumulated capability and systemic coherence.

5. The Seven Pillars of GIPTM-7

The GIPTM-7 framework synthesizes insights from the systematic literature review, thematic clustering of industrial policy determinants, and grounded contextual analysis of Georgia's institutional and economic conditions. While global evidence identifies broad success factors for onward-oriented economies, the grounded comparison demonstrates that Georgia's

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constraints and opportunities align around seven distinct capability domains. These domains form the structural backbone of the proposed upgrading model. The seven pillars are not independent policy areas. They form an interconnected architecture in which institutional integrity enables patient capital; patient capital conditions private-sector upgrading; upgrading demands human capital and infrastructure; sustainability governs long-term competitiveness; and all are shaped by Georgia's EU integration. What follows is a detailed exposition of each pillar as derived through the methodological logic of this research.

5.1. Pillar I - Glassy Institutions & Rule of Law

Comparative evidence from successful small open economies shows that institutional credibility-predictable regulatory enforcement, anti-corruption safeguards, and transparent administrative behavior-forms the essential substrate for productive investment and industrial deepening (Aiginger & Rodrik, 2020;). Thematic synthesis indicates that countries capable of sustained upgrading share an institutional environment that minimizes uncertainty and builds trust among firms, investors, and society. Analysis of Georgian governance reforms reveals progress, yet also structural gaps that continue to raise transaction costs and weaken long-horizon economic commitments.

- Transparency architecture
- Anti-corruption systems
- Judicial capacity
- Digital governance

These institutional elements establish Georgia's credibility as a rules-based environment and define the first, foundational pillar of GIPTM-7.

5.2. Pillar II - Entrepreneurial & Private Sector Capacity

Industrial evolution ultimately materializes through firms, not policy documents. Research on industrial upgrading shows that entrepreneurship, firm sophistication, and value-chain participation are decisive drivers of productivity upgrading. Thematic evidence highlights managerial strengths, innovation adoption, and competitive discipline as the micro-foundations of industrial success. Grounded contextual coding of Georgian enterprise data reveals a business landscape dominated by small, low-capital, low-technology firms that struggle to scale, export, or integrate into higher-value activities.

Georgia's industrial modernization therefore depends not only on firm structures, but also on recognizing and enabling entrepreneurs as national capability-builders who require predictable regulation, public recognition, and targeted support to navigate uncertainty and pursue innovation. This is consistent with emerging evidence that entrepreneurial ecosystems

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increasingly depend on adaptive founders capable of mobilizing decentralized knowledge, collaboration, and innovation under conditions of uncertainty (Moghimi, 2025). Core components of this mechanism include:

- SMEs, startups, *clusters*
- Firm-level *productivity* & governance
- Access to *finance*
- *Entrepreneurial* agency & leadership capacity
  – recognition of entrepreneurial risk-takers as national assets
  – legitimacy and societal/governmental signaling that rewards value creation
  – capability support for first-generation entrepreneurs operating under institutional uncertainty

Strengthening this pillar ensures that Georgia possesses a private-sector base capable of absorbing policy incentives and translating them into real industrial capabilities.

5.3. Pillar III - Strategic State Policy & Industrial Finance

The international literature on late-industrialization demonstrates that state capability-especially in strategic coordination and patient capital provision-drives successful economic diversification (Amsden, 1989; Johnson, 1982; Yülek, 2018). Thematic synthesis highlights development banks, mission-oriented policy design, and targeted financial instruments as recurrent mechanisms behind structural transition. Reviews show that despite Georgia's reform orientation, industrial finance remains shallow, fragmented, and dominated by short-term commercial lending, limiting firms' capacity to invest in technology, upgrading, and export-oriented production.

- Development banks
- Patient capital
- State capability & execution

This pillar provides Georgia with the long-term investment backbone and coordination logic necessary for executing an industrialization agenda.

5.4. Pillar IV - Knowledge & Human Capital Systems

Small economies that succeed globally-Finland, Estonia, Lithuania-invest heavily in knowledge density, not scale (Schienstock, 2004). Thematic synthesis identifies VET reform, applied research, and diaspora knowledge networks as drivers of strategic reforms that directly support industrial systems. Grounded analysis of Georgian education and innovation strategies reveals misalignment between skills supply and industrial demand, limited university engagement with production sectors, and chronically low R&D investment.

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- VET modernization
- Universities & R&D
- Diaspora knowledge networks

This also requires stronger university leadership, closer collaboration between academia and industry, and evidence-informed institutional practices that support long-term capability development (Moghimi & Dundua, 2024).

5.5. Pillar V - Infrastructure & Connectivity

Connectivity-energy reliability, transport efficiency, and digital backbone quality-directly conditions a country's industrial potential. Literature on small internationally integrated states and corridor states shows that physical and digital infrastructures determine cost structures, logistics competitiveness, and the spatial logic of production (OECD, 2023). Contextual evaluation indicates that Georgia's infrastructure architecture is improving yet still constrained by energy vulnerability, uneven digitalization, and logistics gaps that reduce competitiveness and limit integration into value chains.

- Energy security
- Transport & logistic
- Digital backbone

This pillar provides the enabling environment required for productive capacity to grow and integrate into regional and global systems.

5.6. Pillar VI - Sustainability & Industrial Resilience

Global industrial policy now embeds sustainability as a competitiveness criterion. Empirical studies show that green transition, energy diversification, and circular economy practices strengthen long-term industrial resilience, especially in economies targeting EU markets (European Commission, 2019). The reviews identified rising environmental standards across value chains, meaning exporters must comply to remain competitive. Grounded analysis of Georgia highlights energy-intensive sectors, exposure to climate risks, and the emerging impact of EU carbon mechanisms.

- Green industrial transition
- Circular economy
- Climate-proofing industries

This pillar ensures that Georgia's industrial base develops in a direction consistent with future European market requirements and global sustainability constraints.

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5.7. Pillar VII - Global Integration & EU Alignment

Sustained industrial development in small open economies depends not only on domestic capability but also on successful integration into international markets, global value chains, and regulatory systems. Research on small open economies highlights export sophistication, standards convergence, strategic partnerships, and participation in cross-border production networks as key drivers of long-term competitiveness. Georgia's industrial future is closely linked to its Euro-Atlantic orientation. The DCFTA, EU candidate status, and regional connectivity initiatives provide both opportunities for industrial upgrading and obligations to strengthen institutional and regulatory capacity.

- Value-chain insertion
- Export strategy
- EU regulatory convergence
- Industrial alliances

Rather than viewing global integration as an end in itself, GIPTM-7 treats it as the mechanism through which domestic industrial capabilities generate sustainable growth. This pillar connects Georgia's productive capacity with international markets, investment, technology, and regulatory frameworks, enabling the gains achieved across the other six pillars to translate into higher competitiveness, greater resilience, and long-term economic development.

5.8. Pillar Interdependence: The GIPTM-7 System Logic

The seven pillars of GIPTM-7 operate as an integrated capability system whose effectiveness depends on their coordinated development. Rather than functioning as isolated policy domains, the pillars continuously influence one another and collectively shape Georgia's capacity for long-term industrial transformation. Industrial upgrading therefore emerges not from a single reform or policy intervention, but from the interaction of institutions, entrepreneurship, strategic finance, human capital, infrastructure, sustainability, and global integration.

The seven pillars are:

1. Glassy Institutions & Rule of Law
2. Entrepreneurial & Private Sector Capacity
3. Strategic State Policy & Industrial Finance
4. Knowledge & Human Capital Systems
5. Infrastructure & Connectivity
6. Sustainability & Industrial Resilience
7. Global Integration & EU Alignment

At the center of the framework lies structural interdependence. Strong institutions enhance policy credibility and strengthen both state capability and

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private-sector confidence. Strategic finance and patient capital support entrepreneurship, firm upgrading, and technological adoption. Human capital and infrastructure enable productivity gains and industrial competitiveness, while sustainability increasingly shapes firms' access to international markets. Finally, global integration channels these internal capabilities into higher-value economic activity through participation in regional and European value chains. Mechanisms such as the EU's Carbon Border Adjustment Mechanism (CBAM) further illustrate how developments in one pillar may directly affect several others by linking environmental compliance to industrial upgrading, export competitiveness, and investment decisions.

Because the pillars are interconnected, improvements in one area often reinforce progress elsewhere. Greater institutional credibility supports long-term investment, which strengthens entrepreneurial capacity and productive upgrading. As firms expand and adopt more sophisticated technologies, demand for skilled labour, applied research, and reliable infrastructure increases. Likewise, improvements in sustainability and regulatory convergence enhance Georgia's ability to participate in European and international markets. Industrial transformation is therefore best understood as a cumulative process in which progress across the pillars becomes mutually reinforcing over time.

The same interdependence also creates systemic vulnerabilities. Weakness in one pillar can constrain the effectiveness of the others. Limited access to patient capital may reduce firms' ability to modernize despite improvements in education or infrastructure. Skills mismatches can weaken productivity growth and limit participation in higher-value activities. Similarly, infrastructure constraints, weak institutional coordination, or delayed sustainability transitions may reduce the returns generated by reforms undertaken elsewhere. Domestic reforms alone are also unlikely to produce large-scale industrial upgrading without meaningful integration into regional and European economic networks.

These dynamics are particularly important in the Georgian context. Institutional credibility remains uneven, many firms continue to face structural and financial constraints, and patient capital mechanisms remain underdeveloped. Human capital systems and research capabilities have yet to fully align with the requirements of industrial upgrading and European integration. Although infrastructure has improved considerably, vulnerabilities related to energy security and regional connectivity persist. Sustainability transitions are advancing but remain incomplete, while Georgia's European trajectory creates external commitments that shorten the time available for gradual and sequential reforms.

For these reasons, GIPTM-7 should be understood as a coordinated and long-term development framework rather than a collection of independent

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policy priorities. Its contribution lies not only in identifying the capabilities required for industrial transformation, but also in explaining how these capabilities interact, reinforce one another, and collectively shape Georgia's development trajectory. The synchronized strengthening of all seven pillars therefore remains central to achieving sustainable and competitive industrial development.

6. Scenario-Based Simulation of GIPTM-7

Scenario-based simulation enables the GIPTM-7 framework to be examined under alternative future conditions that Georgia may plausibly face. Rather than predicting specific outcomes, scenario analysis evaluates how the framework responds when key structural drivers change and which pillars emerge as strategic accelerators or binding constraints. This approach is particularly appropriate for Georgia, where institutional reforms, integration trajectories, and geopolitical conditions remain dynamic (Schoemaker, 1995). The following scenarios illustrate how the seven pillars interact under different political and economic pathways and identify the conditions most conducive to long-term industrial transformation.

6.1. EU Accession Scenario

In this scenario, Georgia advances credibly toward full EU alignment through sustained institutional reforms, deeper regulatory convergence, and stronger policy coordination. Improvements in institutional credibility increase investor confidence and strengthen the effectiveness of industrial policy and patient capital mechanisms. Greater access to European transition instruments and green financing expands opportunities for productive investment and entrepreneurial upgrading.

As firms integrate more deeply into European value chains, demand for skilled labour, technological capabilities, and modern infrastructure increases. Sustainability requirements become increasingly central rather than optional, particularly under emerging European environmental standards and CBAM-related obligations. Global integration consequently functions as the principal transmission mechanism through which domestic capabilities are translated into higher-value economic activity.

Under these conditions, GIPTM-7 generates a self-reinforcing upgrading dynamic in which institutional improvements, productive capabilities, and international integration mutually strengthen one another and accelerate industrial transformation.

6.2. Diversified Trade Scenario

In this scenario, Georgia continues its European trajectory while simultaneously expanding economic relationships with Central Asia, Türkiye, Middle Corridor economies, and other high-growth markets. Institutional

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reforms proceed more gradually than under the accession scenario, making strategic coordination across the pillars particularly important.

Diversification strengthens economic resilience and broadens opportunities for trade and investment, but it does not automatically produce industrial upgrading. Success depends largely on the ability of entrepreneurial and private-sector actors to adapt to multiple market requirements, absorb new technologies, and compete across different regulatory environments. Strategic industrial finance remains essential for supporting productive sectors such as agri-tech, light manufacturing, ICT, green logistics, and niche export industries.

Human capital and infrastructure become important differentiating factors in this scenario. Rather than responding exclusively to European standards, Georgia must develop capabilities that support engagement across multiple markets. Industrial transformation therefore occurs more gradually and depends less on a single external anchor than on sustained strategic coherence across the seven pillars.

6.3. Slow Reform and Stagnation Scenario

In this scenario, institutional reforms slow considerably, political volatility increases, and policy coordination weakens. As institutional credibility deteriorates, the effectiveness of industrial finance mechanisms declines, patient capital becomes more limited, and entrepreneurial upgrading slows.

Firms remain relatively small, undercapitalized, and less capable of technological adoption and productivity enhancement. Weak linkages between industry, universities, and skills-development systems further constrain productive transformation, while infrastructure improvements generate fewer industrial returns when absorptive capacity remains limited. Sustainability transitions also become more difficult to implement, reducing long-term competitiveness and weakening Georgia's position within higher-value markets.

Without meaningful institutional and economic reforms, global integration becomes narrower in both scope and quality, increasing the likelihood of continued dependence on lower-value activities. Under this scenario, GIPTM-7 reveals a negative feedback loop in which weaknesses in one pillar progressively constrain the performance of the others.

6.4. Strategic Sensitivity Analysis

The final simulation examines which pillars exert the greatest system-wide influence when altered. The analysis identifies three broad sensitivity clusters.

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High-sensitivity pillars**:** Institutional credibility (Pillar I), Strategic State Policy and Industrial Finance (Pillar III), and Global Integration and EU Alignment (Pillar VII). These pillars largely determine whether meaningful industrial upgrading can occur. This finding is consistent with broader industrial policy scholarship emphasizing the importance of institutional capability, coordinated industrial policy, and integration into advanced markets for successful structural transformation (Rodrik, 2004; Yülek, 2018).

Medium-sensitivity pillars**:** Entrepreneurial and Private Sector Capacity (Pillar II) and Knowledge and Human Capital Systems (Pillar IV). These pillars largely determine the depth, speed, and inclusiveness of industrial transformation by shaping firms' ability to absorb technologies, expand productive capabilities, and respond to changing market demands.

Long-term capability pillars**:** Infrastructure and Connectivity (Pillar V) and Sustainability and Industrial Resilience (Pillar VI). These dimensions are fundamental to the durability, resilience, and adaptability of the system over time.

Institutional credibility has the widest influence across the framework. Weak enforcement or inconsistent policy reduces the effectiveness of industrial finance, discourages entrepreneurship, delays infrastructure and sustainability projects, and weakens international integration.

The three scenarios also produce the same broad sequence. Credible institutions support capability formation; stronger productive capabilities justify investment in infrastructure and sustainability; and these foundations make stable integration possible. This follows the four-stage pathway presented in Section 4.3.

Table 2: Summary of Scenario Outcomes and Policy Priorities

Scenario	Most Affected Pillars	Principal Risks	Priority Policy Response
EU Accession	I, III, VII	Capacity constraints during rapid regulatory convergence	Accelerate institutional reforms, expand patient capital, strengthen firm upgrading and human capital
Diversified Trade	II, III, V, VII	Trade diversification without industrial upgrading	Target strategic sectors, strengthen industrial finance, improve logistics and export capabilities
Slow Reform / Stagnation	I, II, III	Institutional uncertainty, declining investment, weak productivity	Restore institutional credibility, improve policy coordination, prioritize capability-building reforms
Institutional Weakness Stress Test	I (with cascading effects across all pillars)	System-wide decline in investment confidence and policy effectiveness	Strengthen governance, judicial predictability, regulatory transparency, and policy consistency

7. Policy Implications

GIPTM-7 suggests that Georgia's industrial constraints should be addressed through a sequenced set of reforms rather than separate policy

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initiatives. The priorities below reflect the country's institutional conditions, productive capacity, and European direction.

7.1. Short-Term Reforms (0–2 Years): Removing Immediate Institutional Blockages

Short-term reforms should reduce the institutional, financial, and operational uncertainty that currently discourages productive investment.

1. Institutional clarity in high-impact areas. Georgia should address commercial court delays, inconsistent infrastructure procurement, unpredictable customs treatment, unclear manufacturing licensing, and insecure land titles in peri-urban industrial zones. Legally defined service standards, digital monitoring, and EU-compatible audit procedures would reduce operational risk. Entrepreneurship should also be recognized as a form of national capability and supported through VET–university cooperation, cluster programs, and early-stage incentives.
2. A ring-fenced industrial finance window. Establishing a new development bank may be costly and politically difficult. A more practical option is to create a protected industrial finance window within an existing institution, such as the Partnership Fund or a regulated commercial consortium. It should operate under independent audit and transparent project-selection rules. Patient capital should initially focus on renewable-energy component assembly, agri-tech and food-processing modernization, light manufacturing, component upgrading, and logistics technology.
3. Skills-to-industry alignment. Universities and VET institutions should provide practical training in entrepreneurship, problem-solving, market testing, value creation, and risk management. Annual Industrial Relevance Dashboards could show how academic and vocational programs correspond to employer and sectoral needs. VET curricula should also be aligned with the priorities identified under the private-sector and industrial-finance pillars so that graduates develop the technical, operational, and managerial skills required by firms.
4. Fast-track licensing for industrial zones**.** A digitally monitored, single-window licensing process should provide decisions within 30 days for industrial areas around Poti, Anaklia, Rustavi, Kutaisi, and Tbilisi Airport. Clear timelines would reduce uncertainty for investors and support faster project implementation.
5. Immediate improvement in energy reliability. Short-term measures should strengthen transmission lines serving industrial corridors, secure seasonal electricity-import arrangements, and provide emergency redundancy for major logistics nodes. These actions would

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improve operational reliability while larger energy projects are being developed.

7.2. Medium-Term Industrial Pathways (2–7 Years): Building Competitive Capabilities

Medium-term policy should concentrate on sectors and locations where Georgia can develop realistic productive advantages.

1. Development of feasible anchor sectors. Georgia is unlikely to compete in scale-intensive heavy industries, but it can develop smaller, higher-value production activities. Priority areas include renewable-energy equipment assembly, smart logistics, supply-chain technologies, advanced food processing, cold-chain exports, specialized medical devices, diagnostic tools, and ICT-based industrial services. Entrepreneurship education and greater social recognition of productive business activity should support these sectors.
2. Cluster formation around existing logistics hubs. Industrial clusters should develop around real infrastructure and transport nodes. Poti–Anaklia could support green logistics, maritime services, cold-chain operations, and nearshore processing. The area surrounding Tbilisi Airport could host modular and higher-value manufacturing, while Kutaisi could support mid-technology production and regional industrial services.
3. Dual financing tracks. Industrial finance should support two objectives. The first is to scale export-ready firms capable of increasing economic complexity. The second is to stabilize strategically important activities, including energy storage, grain processing, and domestic transport services. This approach would support growth while reducing vulnerability to external disruptions.
4. Structured diaspora engagement. Diaspora policy should move from general cultural engagement toward sector-specific industrial cooperation. Georgian specialists abroad could support technology scouting, joint ventures, investment partnerships, and the entry of Georgian startups into European markets. These activities should be organized through permanent technical and financial networks rather than occasional promotional events.
5. Focused micro-R&D centers. Instead of creating large and expensive national laboratories, Georgia could establish smaller research centers linked to priority sectors. Areas such as food safety, materials testing, water engineering, energy optimization, and artificial intelligence for logistics would provide direct support to firms and improve their ability to adopt new technologies.

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7.3. Long-Term EU-Aligned Transformation (7–15 Years): Consolidating Georgia as an Industrial State

Long-term policy should embed GIPTM-7 within the institutional and productive systems required for deeper European integration.

1. Full alignment with evolving EU industrial standards. Georgia should prepare for requirements related to circular production, traceability, digital product passports, clean energy, and environmental reporting. Effective compliance will require stable institutions and implementation capacity, not legislative adoption alone.
2. CBAM readiness. Georgia should assess the carbon intensity of its export sectors and develop sector-specific decarbonization plans. SMEs will require technical support, suitable finance, and targeted incentives to meet emerging European carbon requirements without losing export competitiveness.
3. Digital and green development of the Middle Corridor. Georgia should develop its role as a technology-enabled corridor rather than remain primarily a transit route. Priorities include digital customs procedures, traceability systems, AI-supported port scheduling, and green-corridor certification.
4. Permanent industrial-policy capability within the state. Government institutions should develop industrial risk-assessment units, sectoral intelligence teams, and performance-monitoring systems. These capabilities would support evidence-based decisions and reduce dependence on short-term political priorities.
5. Development as a regional green-energy node. The Black Sea electricity cable, regional balancing capacity, and future hydrogen infrastructure could strengthen Georgia's role as an energy intermediary. This would improve energy security, geopolitical resilience, and the attractiveness of the country for industrial investment.

7.4. Risks and Mitigation Strategies

Several risks could weaken implementation. Reform discontinuity should be reduced by establishing GIPTM-7 as a cross-administration strategy supported by parliamentary oversight and broad political agreement. Policy capture requires transparent procurement, independent audits, and strict anti-corruption screening for recipients of industrial finance. Persistent skills mismatches can be addressed by linking part of public education funding to employment and sectoral outcomes. Infrastructure misalignment should be limited by basing investment decisions on firm demand, cluster potential, and industrial priorities rather than political cycles. Finally, EU alignment fatigue can be reduced by delivering visible industrial results at regular intervals so

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that *firms, citizens, and investors can see the economic value of continued reform.*

7.5. Policy Trade-offs

The proposed reforms involve several trade-offs. Faster licensing should not weaken environmental protection, transparency, or public accountability. Patient capital should be directed toward strategic activities through clear eligibility rules and independent oversight to reduce political capture and inefficient investment. EU alignment should also reflect the adjustment capacity of Georgian firms, especially SMEs, so that compliance requirements do not become an excessive short-term burden.

The sequence remains important. Institutional credibility should be strengthened first, followed by productive and entrepreneurial capabilities. Over time, industrial governance, sustainability, and international integration should be aligned with Georgia's broader European direction.

Table 3: Proposed Implementation Roadmap for GIPTM-7

Phase	Timeline	Strategic Priorities	Expected Outcome
Phase I: Institutional Anchoring	Years 1–2	Strengthen institutional credibility, establish transparent industrial finance mechanisms, accelerate industrial licensing procedures, improve energy reliability, and align skills-development systems with industrial needs.	Greater credibility among investors, development partners, and domestic firms.
Phase II: Capability Expansion	Years 2–7	Develop industrial clusters, expand sector-specific innovation and talent pipelines, strengthen productive capabilities, diversify financial instruments, and improve green logistics and export readiness.	Transition toward a more competitive and upgrading-driven industrial ecosystem.
Phase III: EU-Ready Industrial State	Years 7–15	Deepen EU-aligned industrial governance, strengthen decarbonization strategies, integrate Georgian firms and clusters into international value chains, and institutionalize mission-driven industrial policymaking.	A resilient, export-oriented, and internationally integrated industrial system capable of sustained transformation.

Conclusion

Georgia has made important progress in governance, market reform, and international integration, yet its industrial base remains narrow and vulnerable. GIPTM-7 was developed to explain how institutional credibility, industrial finance, entrepreneurship, human capital, infrastructure, sustainability, and global integration can support a more diversified economy. The analysis shows that these areas cannot be treated separately. Institutional credibility affects investment and policy execution. Firms determine whether public support becomes productive capacity. Skills and infrastructure influence the ability of firms to upgrade, while international integration creates

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greater value when domestic capabilities are strong enough to use it. The scenarios also show that slow reform in one pillar can weaken progress across the framework.

Contributions and Policy Implications

The paper makes three main contributions. First, it brings seven important areas of industrial development into one Georgia-specific framework. Second, it treats industrial transformation as a capability-building process involving the state, firms, financial institutions, universities, and other knowledge actors. Third, it uses scenario analysis to examine how the framework may perform under different political, economic, and geopolitical conditions.

The central policy message is practical. Georgia needs a capable and predictable state rather than simply a larger one. Transparent institutions, patient capital, stronger firms, relevant skills, reliable infrastructure, sustainability, and EU alignment should support the same long-term direction. GIPTM-7 does not prescribe one fixed route. It helps identify which capabilities are weak, how they affect the other pillars, and where coordination is most necessary.

Limitations and Future Research

The study is conceptual and relies mainly on secondary evidence and qualitative analysis. It does not measure the strength of relationships among the seven pillars or predict specific economic outcomes. Future research should test the framework through firm-level studies, sectoral cases, comparisons with other EU-oriented transition economies, and quantitative modelling.

Further work may also examine how geopolitics, the Middle Corridor, technological change, and environmental requirements alter Georgia's industrial options. Such research could refine the pillars and show how institutional capability develops under changing conditions.

GIPTM-7 provides a foundation for this work and for further policy analysis in Georgia and other small open economies facing similar development challenges.

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