GPH-International Journal of Business Management
(E-ISSN 3027-0537 || P-ISSN 3027-0375)
Volume 09 | Issue 10 | October 2026
Published by: Global Publication House
DOI: https://doi.org/10.5281/zenodo.23615463
Available online at: www.gphjournal.org
Journal homepage: https://gphjournal.org/index.php/bm/index

CAPABILITY TRANSFORMATION MODEL OF SUSTAINABLE DEVELOPMENT

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Abstract

Sustainable development is often explained through economic growth, institutions, or productive sophistication. This paper develops the Capability Transformation Model of Sustainable Development, which conceptualizes development as the sequential transformation of Social Capacity, Political Capacity, and Economic Capacity. Using a balanced panel of 132 countries (2002–2023), with Voice and Accountability, Government Effectiveness, Economic Complexity, and Planetary-adjusted Human Development as proxies, the analysis employs System GMM, causal mediation, and structural equation modelling. Results support a significant sequential pathway linking the three capacities to sustainable development. The paper reconceptualizes structural transformation as capability transformation culminating in Ever-Flourishing Human Conditions.

Keywords:

Sustainable Development; Capability Transformation; Structural Transformation; Social Capacity; Political Capacity; Economic Capacity; Economic Complexity; Institutional Economics; Human Flourishing.

1. Introduction

Sustainable development remains one of the most important yet unresolved challenges in contemporary development economics. Despite decades of economic growth, technological advancement, globalization, and policy reforms, countries continue to exhibit substantial differences in their ability to achieve enduring improvements in human well-being while maintaining environmental sustainability. While some nations have successfully translated economic prosperity into sustained human flourishing, others remain trapped in cycles of weak institutions, limited productive capabilities, environmental degradation, and low levels of sustainable human development. These divergent outcomes raise an important question: why do countries with similar growth experiences often achieve vastly different sustainable development outcomes?

Traditional growth theories have generally explained development through capital accumulation, labor productivity, technological progress, and the expansion of economic output (Romer, 1990; Solow, 1956). Similarly, classical structural transformation theories have emphasized the reallocation of labor and resources from low-productivity sectors such as

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agriculture to higher-productivity sectors such as manufacturing and services (Chenery, 1960; Kuznets, 1966; Lewis, 1954). While these perspectives have improved understanding of economic growth and modernization, they provide only partial explanations of sustainable development. Economic growth does not automatically generate effective institutions, productive sophistication, social cohesion, environmental sustainability, or durable human flourishing.

The growing recognition of these limitations has stimulated renewed interest in institutions, governance, capabilities, and productive knowledge as drivers of development. Institutional economists have argued that differences in prosperity are strongly influenced by the quality of institutions and the distribution of political power (Acemoglu & Robinson, 2012; North, 1990). The capability approach has shifted attention from economic outputs toward the expansion of human freedoms and opportunities as the true objective of development (Sen, 1999). More recently, the economic complexity literature has emphasized the role of productive knowledge, technological capabilities, and productive sophistication in shaping long-run development outcomes (Hausmann et al., 2014; Hidalgo & Hausmann, 2009).

Although these perspectives have enriched development scholarship, they have largely evolved as separate streams of inquiry. Growth theories explain how economies expand. Institutional theories explain how governance structures influence economic outcomes. Capability theories explain the normative objectives of development. Economic complexity theory explains the productive foundations of prosperity. However, relatively little attention has been devoted to understanding how social, political, and economic capabilities interact sequentially to produce sustainable development.

This paper addresses this gap by advancing the Capability Transformation Model of Sustainable Development (CTMSD). The model proposes that sustainable development is not an automatic consequence of economic growth but a manufactured outcome arising from the sequential transformation of Social Capacity, Political Capacity, and Economic Capacity. Social Capacity refers to the collective ability of a society to generate accountability, trust, civic participation, responsible citizenship, and shared developmental aspirations. Political Capacity refers to the capability of institutions to translate societal aspirations into effective governance, public policy, and coordinated action. Economic Capacity refers to the productive, innovative, technological, and knowledge-based capabilities that enable societies to create sustainable prosperity.

The theoretical argument advanced in this paper is that structural transformation should be reconceptualized as a process of sequential capability transformation. Rather than viewing transformation solely as movement between sectors of economic activity, development should be understood as the progressive upgrading of capacities across the social, political, and economic spheres. Sustainable development emerges when societies successfully transform lower-order capabilities into higher-order capabilities, with each sphere creating the conditions necessary for advancement in the next.

Within the social sphere, development begins with the transition from barbarism to civility. Barbarism is defined as the pursuit of individual or group interests in ways that limit the opportunities, welfare, and advancement of others. Civility, by contrast, represents the pursuit of interests without constraining the development of others and is characterized by accountability, cooperation, trust, and responsible citizenship. Within the political sphere,

transformation involves movement from predatory governance to developmental governance. Predatory governance directs institutional effectiveness toward narrow interests, while developmental governance directs institutional capability toward collective welfare and structural transformation. Within the economic sphere, transformation involves progression from extractive productivity to generative productivity. Extractive productivity relies primarily on resource exploitation and simple productive activities, whereas generative productivity is driven by innovation, technological capability, productive sophistication, and knowledge creation.

The culmination of these transformations is a developmental condition referred to in this paper as Ever-Flourishing Human Conditions. Ever-Flourishing Human Conditions describe a sustained state of human well-being characterized by expanding opportunities, productive prosperity, social inclusion, institutional resilience, environmental sustainability, and intergenerational welfare. This concept extends conventional understandings of sustainable development by emphasizing the long-term alignment of human flourishing with planetary boundaries.

The argument developed in this paper is informed by empirical evidence derived from a global panel study of 132 countries covering the period 2002–2023. The findings revealed a significant positive relationship between Voice and Accountability and Government Effectiveness ($\beta = 0.450$, $p < .001$), a significant positive relationship between Government Effectiveness and Economic Complexity ($\beta = 0.457$, $p < .001$), and a significant positive relationship between Economic Complexity and Planetary-adjusted Human Development ($\beta = 0.048$, $p < .001$). Furthermore, the complete sequential pathway linking Voice and Accountability, Government Effectiveness, Economic Complexity, and Planetary-adjusted Human Development remained positive and highly significant ($\beta = 0.010$, $p < .001$). These findings suggest that sustainable development emerges through a sequential process of capability transformation rather than through economic growth alone.

Accordingly, this paper makes three principal contributions to the development literature. First, it introduces the Capability Transformation Model as a new theoretical framework for understanding sustainable development. Second, it reconceptualizes structural transformation as a process of capability upgrading rather than merely sectoral change. Third, it explains cross-national differences in sustainable development through the transformation of lower-order and higher-order capacities within the social, political, and economic spheres.

The remainder of the paper is organized as follows. Section 2 reviews existing approaches to structural transformation and identifies the theoretical gap addressed by the study. Sections 3, 4, and 5 develop the social, political, and economic dimensions of the Capability Transformation Model. Section 6 presents the empirical validation of the model. Section 7 explains how sequential capability transformation produces Ever-Flourishing Human Conditions. The final section discusses the implications of the model for development theory and policy and concludes with the central proposition that sustainable development is a manufactured outcome arising from the sequential transformation of a nation's social, political, and economic capacities.

2. Rethinking Structural Transformation

Structural transformation has occupied a central position within development economics for more than half a century. Classical development theorists viewed structural transformation primarily as the process through which labour, capital, and production shift from low-productivity activities to higher-productivity activities, particularly from agriculture to manufacturing and subsequently to advanced services (Chenery, 1960; Kuznets, 1966; Lewis, 1954). Within this tradition, development was largely interpreted as a process of economic modernization characterized by industrialization, urbanization, technological advancement, and rising productivity. Economic progress was therefore understood principally through changes in the composition of production and the increasing sophistication of economic activity.

This perspective generated important insights into the growth experiences of many economies. Countries that successfully moved labour and resources from traditional sectors to modern sectors generally achieved higher productivity, rising incomes, and improved living standards. Consequently, structural transformation became associated with the reorganization of economic activity toward more productive uses and was widely regarded as the engine of economic development.

Despite its explanatory power, however, the traditional understanding of structural transformation leaves important questions unanswered. Economic transformation does not invariably produce sustainable development. Many countries have successfully industrialized and expanded their productive sectors while remaining characterized by weak institutions, environmental degradation, social exclusion, and limited improvements in sustainable human welfare. Conversely, some countries have achieved relatively strong development outcomes despite more modest rates of economic growth. These observations suggest that changes in economic structure alone cannot fully explain differences in sustainable development outcomes.

A similar limitation exists within neoclassical and endogenous growth theories. Growth models emphasize the accumulation of physical capital, human capital, productivity improvements, and technological innovation as the principal determinants of long-run economic performance (Romer, 1990; Solow, 1956). These theories provide powerful explanations for how economies expand. However, they generally assume that growth ultimately translates into societal welfare and therefore provide limited insight into the processes through which economic gains are transformed into sustainable human flourishing. Economic growth may be necessary for development, but it is not sufficient to guarantee sustainable development.

In response to these limitations, institutional economists shifted attention toward the role of institutions in shaping development outcomes. North (1990) argued that institutions provide the formal and informal rules that structure economic and social interactions, while Acemoglu and Robinson (2012) emphasized the importance of inclusive political and economic institutions in creating the conditions necessary for sustained prosperity. These contributions redirected development analysis away from economic resources alone and toward the institutional environments within which development occurs.

Nevertheless, institutional explanations also face important limitations. Institutions themselves do not emerge in isolation. They are embedded within broader social systems and reflect

prevailing societal values, norms, expectations, and patterns of collective action. Effective institutions require public legitimacy, accountability, and civic engagement. Consequently, institutional quality may itself be the outcome of deeper societal capabilities rather than an independent driver of development. Existing institutional theories explain why institutions matter but provide less guidance concerning the social transformations that make effective institutions possible.

The capability approach advanced by Sen (1999) further broadened development thinking by redefining development as the expansion of human freedoms and capabilities rather than the accumulation of wealth alone. This perspective placed human flourishing at the centre of development analysis and profoundly influenced contemporary conceptions of human development. By shifting attention from economic outputs to human opportunities, the capability approach provided a richer understanding of the purpose of development. However, while it clarifies what development should achieve, it offers less explanation of how societies systematically build and transform the capabilities necessary to achieve those outcomes.

More recently, the economic complexity literature has highlighted the importance of productive knowledge and capabilities in explaining differences in prosperity across nations. According to this perspective, development depends fundamentally on the accumulation of knowledge embedded within productive systems and reflected in the sophistication of goods and services that economies are capable of producing (Hausmann et al., 2014; Hidalgo & Hausmann, 2009). Countries possessing greater productive knowledge tend to exhibit higher incomes, stronger innovation systems, and greater economic resilience. Economic complexity therefore provides a compelling explanation of long-term economic performance. Yet this literature generally pays less attention to the societal and institutional transformations that enable productive sophistication to emerge in the first place.

Evolutionary economists similarly emphasize the roles of innovation, learning, adaptation, and capability accumulation in economic development. Schumpeter (1934) viewed development as a process of creative destruction driven by entrepreneurial innovation, while Nelson and Winter (1982) conceptualized economic change as an evolutionary process shaped by routines, learning, and institutional adaptation. These perspectives contribute significantly to understanding how economies evolve over time. However, they still provide only partial explanations of how transformations within society, governance systems, and productive structures combine to generate sustainable development.

Taken together, these various traditions illuminate important dimensions of development, yet they remain fragmented. Growth theories explain economic expansion. Institutional theories explain governance quality. Capability theories explain human flourishing. Economic complexity theories explain productive sophistication. Evolutionary theories explain economic adaptation. However, none provides a fully integrated explanation of how these dimensions interact sequentially to generate sustainable development.

This paper argues that the principal limitation of existing approaches lies in their tendency to treat social, political, and economic factors as parallel determinants of development rather than as interconnected stages within a developmental process. Development does not occur because social capacity, political capacity, and economic capacity independently influence outcomes. Rather, development occurs because each sphere creates the conditions necessary for transformation within the next sphere.

Accordingly, this paper proposes a reconceptualization of structural transformation. Instead of viewing transformation primarily as a sectoral process involving the movement of resources across economic activities, structural transformation should be understood as a process of sequential capability transformation. Under this interpretation, development begins with the transformation of Social Capacity, which subsequently gives rise to stronger Political Capacity. Political Capacity then facilitates the creation of Economic Capacity, and Economic Capacity ultimately generates sustainable human flourishing.

The central unit of analysis therefore shifts from sectors to capacities. Structural transformation becomes the process through which societies progressively upgrade their abilities to cooperate, govern, innovate, and sustain human well-being. Development is no longer viewed simply as economic modernization, but as the progressive evolution of the capabilities required to support ever-higher levels of human flourishing.

Within this framework, sustainable development is understood not as the automatic outcome of economic growth but as the outcome of successful capability transformation across the social, political, and economic spheres. The Capability Transformation Model developed in this paper therefore proposes that sustainable development is the manufactured outcome of a sequential developmental process linking Social Capacity, Political Capacity, Economic Capacity, and ultimately Ever-Flourishing Human Conditions. The next section develops the conceptual foundations of Social Capacity and examines how societies transform from barbarism to civility as the first stage of sustainable development.

3. The Social Capacity Sphere: From Barbarism to Civility

The Capability Transformation Model begins with the proposition that sustainable development originates within society before it manifests within institutions or economies. While conventional development theories frequently identify capital accumulation, industrialization, state effectiveness, or technological progress as the primary drivers of development, this paper argues that the deeper foundations of sustainable development lie in the quality of a society's social relationships. Institutions, productive systems, and governance structures do not emerge independently; rather, they are embedded within social environments that shape collective behaviour, public expectations, and developmental aspirations (North, 1990; Sen, 1999).

Social Capacity therefore constitutes the first sphere of transformation within the Capability Transformation Model. It refers to a society's collective ability to build trust, accountability, cooperation, participation, and commitment to shared developmental objectives. Social Capacity encompasses the norms, values, behaviors, and relationships that enable citizens to organize collectively and influence the direction of societal progress. It reflects how well a society aligns individual aspirations with collective welfare.

Unlike many conventional approaches that treat social variables as secondary to economic factors, the Capability Transformation Model positions Social Capacity as the foundation upon which Political Capacity and Economic Capacity are subsequently built. The central argument is that societies do not develop institutions and productive systems independently of their social conditions. Rather, the quality of governance and productive capabilities reflects the quality of the underlying social order.

3.1 Social Capacity as the Developmental Foundation

Social Capacity matters because it generates the social conditions necessary for institutional effectiveness. Citizens interact continuously with public institutions, markets, and one another. The quality of these interactions determines how much collective action is possible.

Societies with strong Social Capacity tend to show higher levels of trust, civic participation, accountability, cooperation, and public responsibility. These traits facilitate collective action by reducing conflict, lowering transaction costs, strengthening social cohesion, and increasing institutional legitimacy. As a result, such societies are better able to build effective governance systems and productive economies.

Conversely, societies with weak Social Capacity frequently face persistent governance challenges. Low trust, weak accountability mechanisms, social fragmentation, and widespread exclusion reduce the effectiveness of collective action and weaken institutional performance. In such environments, governance reforms often struggle to achieve sustained results because the social foundations necessary for institutional effectiveness remain underdeveloped.

The empirical evidence supporting this proposition is substantial. The broader study upon which this paper is based found a strong positive association between Voice and Accountability and Government Effectiveness ($r = .8076$, $p < .001$). Furthermore, the Structural Equation Model revealed a statistically significant pathway from Voice and Accountability to Government Effectiveness ($\beta = .450$, $p < .001$). These findings suggest that Social Capacity creates the societal environment from which Political Capacity emerges. Effective governance is therefore not merely a function of administrative design but also a reflection of societal capability.

3.2 Barbarism as a Lower-Order Social Capacity

The Capability Transformation Model conceptualizes the lower-order manifestation of Social Capacity as barbarism.

Within this framework, barbarism does not refer to the absence of culture, civilization, or social organization. Rather, it refers to a developmental condition in which individuals, groups, organizations, and institutions pursue their interests in ways that constrain or diminish the opportunities available to others.

Barbarism may therefore be defined as:

The pursuit and fulfillment of individual or collective interests in ways that limit the welfare, opportunities, advancement, or flourishing of others.

Such a social order is characterized by low levels of trust, weak accountability, exclusionary practices, corruption tolerance, factional competition, patronage systems, rent-seeking behaviour, and fragmented collective action. Public resources are frequently viewed as opportunities for private gain, while public institutions become instruments for advancing narrow group interests rather than collective welfare.

Under conditions of barbarism, social interactions tend to assume a zero-sum character. Individuals often perceive their advancement as requiring the limitation of others. Citizens may participate selectively in public affairs, social trust remains weak, and accountability

mechanisms function poorly. Although economic activity may occur under such circumstances, the broader social environment remains poorly suited to supporting sustained institutional and productive development.

Barbarism therefore represents a lower-order social equilibrium in which societal energies are directed toward competing for existing opportunities rather than creating new opportunities. The consequence is a social environment that constrains both institutional effectiveness and productive transformation.

3.3 Civility as a Higher-Order Social Capacity

The higher-order manifestation of Social Capacity is conceptualized as civility.

Within the Capability Transformation Model, civility represents a developmental condition in which individuals and groups pursue their interests without limiting the opportunities and advancement of others. Rather than operating through exclusion, societies characterized by civility generate value through cooperation, accountability, and collective responsibility.

Civility may therefore be defined as:

The pursuit and fulfillment of individual or collective interests without limiting the welfare, opportunities, advancement, or flourishing of others.

Under conditions of civility, public life is characterized by mutual respect, responsible citizenship, trust, accountability, social cooperation, transparency, tolerance, and commitment to the common good. Citizens recognize both rights and responsibilities. Public institutions are viewed as collective assets rather than private resources, and individual advancement increasingly occurs through value creation rather than through exclusionary control of opportunities.

The developmental significance of civility lies in its ability to facilitate collective action. Trust lowers the costs of cooperation. Accountability strengthens institutional responsiveness. Public participation enhances legitimacy, while social responsibility promotes long-term societal investment. Together, these characteristics create the conditions necessary for effective governance and productive transformation.

Importantly, civility does not imply the absence of competition or differences in interests. Rather, it implies that competition occurs within institutional arrangements that permit broad participation and shared advancement. In this sense, civility transforms social interactions from predominantly zero-sum relationships into increasingly positive-sum relationships.

3.4 The Transformation from Barbarism to Civility

The first stage of the Capability Transformation Model is the transformation of Social Capacity from barbarism to civility.

This transformation represents more than a change in individual attitudes. It involves a broader restructuring of societal norms, values, expectations, and incentive systems. Societies gradually move from environments characterized by exclusion and narrow self-interest toward environments characterized by cooperation, accountability, and mutual advancement.

The developmental consequences of this transformation are significant. As trust increases, cooperation becomes easier. As cooperation improves, collective action becomes more effective. As collective action strengthens, demands for accountability become more credible. As accountability improves, institutions become more responsive. Consequently, the transformation from barbarism to civility generates the societal conditions necessary for stronger Political Capacity to emerge.

The empirical evidence associated with the model supports this argument. The significant influence of Voice and Accountability on Government Effectiveness suggests that improvements in Social Capacity are associated with corresponding improvements in Political Capacity. Societies possessing stronger mechanisms of civic participation, accountability, and public engagement tend to exhibit stronger governance systems. Social transformation therefore precedes and facilitates institutional transformation.

3.5 Social Capacity and the Emergence of Political Capacity

A central implication of the Capability Transformation Model is that Social Capacity performs the initiating role within the broader developmental process. Political institutions may possess formal authority, but their long-run effectiveness is strongly influenced by the quality of the societies within which they operate.

The empirical findings reinforce this conclusion. Voice and Accountability exhibited both a strong correlation with Government Effectiveness ($r = .8076$, $p < .001$) and a significant direct effect within the structural model ($\beta = .450$, $p < .001$). These results suggest that effective governance does not emerge independently of society. Rather, governance quality is deeply influenced by the degree to which societies cultivate accountability, participation, trust, and civic responsibility.

Within the Capability Transformation Model, Social Capacity therefore functions as the developmental foundation upon which all subsequent transformations depend. It supplies the societal energy, legitimacy, accountability pressures, and collective aspirations necessary for institutional development. Without Social Capacity, Political Capacity remains fragile. Without Political Capacity, Economic Capacity remains constrained. Development therefore begins with society.

Accordingly, the first stage of sustainable development may be summarized as:

Barbarism → Civility

This transformation represents the social foundation of sustainable development and constitutes the first step in the broader process of sequential capability transformation. The next stage involves the conversion of Social Capacity into Political Capacity through the transformation of governance systems from predatory governance to developmental governance.

4. The Political Capacity Sphere: From Predatory Governance to Developmental Governance

Within the Capability Transformation Model, Political Capacity occupies a pivotal position between society and the economy. While Social Capacity generates the civic values, accountability pressures, and collective aspirations necessary for development, these societal resources cannot produce sustainable development outcomes unless they are translated into

effective institutional action. Political Capacity performs this conversion function. It transforms the developmental energy generated within society into policies, institutions, regulations, and coordinated actions capable of driving productive transformation.

Political Capacity refers to the ability of public institutions to formulate, coordinate, implement, and sustain policies that advance collective welfare and long-term development. It encompasses government effectiveness, bureaucratic competence, policy implementation capability, institutional credibility, regulatory quality, strategic coordination, and state capacity. This conception is consistent with institutional economics, which emphasizes that institutions shape economic incentives, reduce uncertainty, and facilitate productive activity (North, 1990). It also aligns with developmental state literature, which highlights the importance of capable institutions in facilitating industrial upgrading, technological learning, and economic transformation (Evans, 1995).

The empirical findings of this study strongly support the centrality of Political Capacity within the developmental process. The Structural Equation Model revealed that Voice and Accountability exerted a significant positive influence on Government Effectiveness ($\beta = .450$, $p < .001$). Similarly, the correlation analysis demonstrated a strong positive relationship between the two variables ($r = .8076$, $p < .001$). These findings suggest that Political Capacity does not arise independently of society; rather, it emerges from the quality of Social Capacity present within a nation.

More importantly, the mediation analysis demonstrated that Government Effectiveness mediated approximately 65.39 percent of the total effect of Voice and Accountability on Economic Complexity. The Average Causal Mediation Effect remained highly significant (ACME = 0.2056, $p < .001$), indicating that Political Capacity serves as the principal transmission mechanism through which Social Capacity influences Economic Capacity. These results suggest that civic participation, accountability, and public voice become developmentally consequential only when translated into effective institutional capability.

4.1 Predatory Governance as a Lower-Order Political Capacity

The Capability Transformation Model conceptualizes the lower-order manifestation of Political Capacity as Predatory Governance.

Predatory Governance refers to a condition in which political institutions primarily serve narrow interests rather than collective welfare. Administrative capability, where it exists, is directed toward preserving power, extracting rents, sustaining patronage systems, or maintaining elite privileges. Public institutions may function formally, yet they lack the developmental orientation required to facilitate broad-based structural transformation.

Under conditions of Predatory Governance, policymaking is often characterized by short-termism, weak implementation, institutional inconsistency, corruption, regulatory uncertainty, and limited accountability. Public authority is employed largely for political survival rather than productive transformation. As a result, state effectiveness may coexist with developmental stagnation because institutional resources are not aligned with long-term developmental objectives.

The findings of this study provide indirect support for this interpretation. Government Effectiveness was found to exert a statistically significant negative direct effect on Planetary-

adjusted Human Development in both the mediation model ($\beta = –0.0185$, $p < .001$) and the Structural Equation Model ($\beta = –0.041$, $p < .001$). These results indicate that institutional effectiveness alone does not automatically produce sustainable development outcomes. Effective states may facilitate environmentally intensive growth, resource extraction, and unsustainable development pathways if institutional capability is not directed toward productive sophistication.

This finding challenges the widely held assumption that stronger governance necessarily leads to better development outcomes. Instead, the study suggests that the developmental value of Political Capacity depends critically on the objectives toward which institutional effectiveness is deployed.

4.2 Developmental Governance as a Higher-Order Political Capacity

The higher-order manifestation of Political Capacity is conceptualized as Developmental Governance.

Developmental Governance refers to a condition in which political institutions possess both the capability and the commitment to advance collective welfare through long-term structural transformation. Institutions operating within this framework are characterized by administrative professionalism, policy coherence, strategic coordination, effective implementation, accountability, and developmental vision.

Unlike Predatory Governance, Developmental Governance intentionally directs institutional capability toward productive transformation. Government effectiveness is utilized to strengthen productive capabilities, facilitate innovation, coordinate investments, improve human capital, build infrastructure, and create an enabling environment for technological upgrading and industrial diversification.

The empirical findings strongly support this interpretation. Government Effectiveness exhibited a significant positive relationship with Economic Complexity ($\beta = .457$, $p < .001$), while the correlation between the two variables remained very strong ($r = .7939$, $p < .001$). These findings indicate that effective institutions contribute substantially to the development of productive sophistication and economic capability.

The mediation results provide further evidence. Political Capacity transmitted more than sixty-five percent of the influence of Social Capacity on Economic Capacity. This finding suggests that Developmental Governance performs a conversion function through which societal values, public accountability, and civic aspirations become productive capabilities. Institutional effectiveness therefore acquires developmental significance when it facilitates the emergence of higher-order economic systems.

4.3 Political Capacity as the Developmental Converter

A central proposition of the Capability Transformation Model is that Political Capacity functions as a developmental converter. Just as a transmission system converts energy into motion, Political Capacity converts societal aspirations into developmental action.

The empirical evidence supports this proposition. Social Capacity alone did not directly generate productive sophistication. Instead, Political Capacity served as the mechanism through which societal accountability pressures influenced Economic Capacity. Likewise, Political

Capacity alone did not generate sustainable development. Rather, it contributed to Sustainable Development only when transmitted through Economic Capacity.

This dual mediating role places Political Capacity at the centre of the developmental process. It serves as the institutional bridge between society and the economy, connecting civic aspirations with productive transformation. Without adequate Political Capacity, civic participation remains aspirations without implementation. Similarly, without effective institutions, productive transformation remains difficult to achieve regardless of societal goodwill or resource availability.

Political Capacity therefore represents the critical conversion stage within the broader capability transformation sequence. Its developmental effectiveness depends not only on institutional competence but also on the direction toward which institutional competence is applied.

4.4 The Political Transformation Proposition

The evidence generated by this study supports the proposition that sustainable development requires the transformation of Political Capacity from lower-order to higher-order forms.

Specifically, the findings indicate that societies characterized by stronger Social Capacity are more likely to generate effective institutions, while effective institutions are more likely to generate productive sophistication when they operate within a developmental rather than predatory framework. Political transformation therefore represents a necessary step in the broader process of sustainable development.

Accordingly, the Capability Transformation Model proposes the following developmental progression:

Predatory Governance → Developmental Governance

This transformation reflects movement from institutions that primarily manage power and resources to institutions that actively create developmental opportunities. Through this process, Political Capacity becomes capable of converting social aspirations into productive capabilities and ultimately supporting sustainable human flourishing.

The model therefore positions Political Capacity as the developmental converter within the broader capability transformation process. Social Capacity provides societal direction, Political Capacity provides institutional conversion, and Economic Capacity provides productive realization. Together, these capacities create the pathway through which sustainable development is manufactured rather than merely anticipated.

5. The Economic Capacity Sphere: From Extractive Productivity to Generative Productivity

Within the Capability Transformation Model, Economic Capacity constitutes the third sphere of developmental transformation and the immediate precursor to sustainable development. While Social Capacity creates the societal foundations for collective action and Political Capacity converts those societal aspirations into institutional capability, neither sphere is sufficient on its own to generate enduring human flourishing. Sustainable development ultimately depends on a society's ability to transform its social and political capabilities into

productive capabilities capable of creating prosperity, innovation, resilience, and ecological sustainability.

Economic Capacity refers to the productive, technological, innovative, and knowledge-generating capabilities embedded within an economy. It reflects the extent to which a society can organize, combine, and apply knowledge to create increasingly sophisticated goods and services. In this study, Economic Capacity is operationalized through the Economic Complexity Index (ECI), which captures the diversity and sophistication of productive knowledge embedded within national economies (Hausmann et al., 2014; Hidalgo & Hausmann, 2009). Although Economic Capacity is conceptually broader than Economic Complexity, ECI serves as a robust empirical proxy because it measures the productive knowledge and sophistication accumulated within an economy's structure.

Unlike conventional development models that equate economic progress with output expansion, the Capability Transformation Model argues that the critical developmental challenge is not simply increasing production but increasing productive sophistication. What distinguishes prosperous and sustainably developed societies is not merely the volume of resources they possess but the quality of the productive capabilities they create and continuously upgrade.

5.1 Economic Capacity as Productive Capability

The theoretical significance of Economic Capacity lies in its ability to transform institutional capability into sustained human welfare. Productive systems constitute the mechanism through which societies convert knowledge, institutions, technology, and organization into tangible improvements in living conditions.

Economic Capacity therefore occupies a unique position within the developmental process. Whereas Social Capacity generates developmental aspirations and Political Capacity provides coordination and implementation capability, Economic Capacity generates the material conditions necessary for societal advancement. It is through Economic Capacity that societies create jobs, accumulate knowledge, foster innovation, increase productivity, and expand opportunities for current and future generations.

The empirical findings strongly support this interpretation. Government Effectiveness exhibited a strong positive correlation with Economic Complexity ($r = .7939$, $p < .001$), while the Structural Equation Model revealed a significant positive pathway between Government Effectiveness and Economic Complexity ($\beta = .457$, $p < .001$). These findings indicate that stronger Political Capacity contributes directly to the development of productive sophistication, technological capability, and economic complexity.

The results suggest that Political Capacity becomes economically meaningful when it strengthens a society's capability to learn, innovate, diversify production, and generate increasingly sophisticated economic outputs. Economic Capacity therefore emerges not as an independent phenomenon but as the productive manifestation of successful institutional transformation.

5.2 Extractive Productivity as a Lower-Order Economic Capacity

The Capability Transformation Model conceptualizes the lower-order manifestation of Economic Capacity as extractive productivity.

Extractive productivity refers to a developmental condition in which economic expansion depends primarily on natural resource extraction, commodity exports, low-value-added production, limited productive diversification, and relatively simple productive structures. Such economies often generate wealth by exploiting existing resources rather than by creating new productive knowledge.

Under conditions of extractive productivity, growth may occur and incomes may rise. However, productive learning remains limited, technological upgrading progresses slowly, and innovation systems remain weak. Resource dependence frequently exposes economies to external shocks, commodity-price volatility, and environmental pressures. Economic activity remains largely concentrated in sectors requiring relatively low levels of productive sophistication.

The findings of this study suggest that extractive productivity creates important developmental limitations. Most significantly, the mediation analysis revealed that Government Effectiveness exerted a negative direct effect on Planetary-adjusted Human Development ($\beta = -0.0185$, $p < .001$). Similarly, the Structural Equation Model estimated a negative direct relationship between Government Effectiveness and PHDI ($\beta = -0.041$, $p < .001$). These results indicate that Political Capacity alone does not guarantee sustainable development outcomes.

Indeed, governments can become highly effective at administering extractive economic systems. Administrative efficiency may facilitate more efficient resource exploitation, accelerated extraction, or environmentally intensive growth. Consequently, institutional effectiveness operating within extractive economic structures may increase economic activity while simultaneously undermining long-term sustainability. Effective governance, therefore, should not be automatically equated with sustainable development.

These findings challenge a common assumption within the governance literature, namely that improving state effectiveness necessarily improves developmental outcomes. The results suggest instead that the developmental consequences of Political Capacity depend critically on the nature of the productive system through which governance capability operates.

5.3 Generative Productivity as a Higher-Order Economic Capacity

The higher-order manifestation of Economic Capacity is conceptualized as generative productivity.

Generative productivity refers to a developmental condition in which economic value is increasingly created through innovation, technological advancement, productive sophistication, industrial diversification, scientific learning, and knowledge creation. Unlike extractive productivity, generative productivity depends primarily on the accumulation and application of capabilities rather than the depletion of resources.

Economies characterized by generative productivity continuously expand their productive knowledge base. Firms learn to create new combinations of capabilities, develop increasingly sophisticated products, and move into higher-value stages of production. Economic growth

therefore becomes increasingly driven by learning, experimentation, innovation, and capability accumulation.

Generative productivity creates several developmental advantages. First, it enhances resilience by diversifying productive structures and reducing dependence on individual sectors or commodities. Second, it increases the capacity of an economy to adapt to technological change. Third, it promotes higher productivity, higher wages, and greater opportunities for human advancement. Finally, it creates the conditions necessary for generating prosperity without proportionate increases in resource consumption and environmental degradation.

The empirical evidence generated by this study strongly supports the developmental significance of generative productivity. The mediation analysis revealed a positive and highly significant indirect effect of Government Effectiveness on Planetary-adjusted Human Development through Economic Complexity ($\beta = 0.0279$, $p < .001$). This finding indicates that Economic Capacity functions as the mechanism through which Political Capacity contributes positively to sustainable development.

Even more importantly, the mediation proportion reached 297.76 percent, indicating the presence of a complete suppressor effect. This result suggests that productive sophistication does not merely contribute to development alongside governance; rather, it fundamentally transforms the developmental consequences of governance itself. Political Capacity that may otherwise support environmentally intensive growth becomes a positive contributor to sustainable development when channelled through sophisticated productive structures.

Consequently, generative productivity performs a developmental role that extends beyond conventional production. It transforms governance capability into sustainable prosperity by altering the productive logic through which economic activity occurs.

5.4 Economic Capacity and Sustainable Development

The empirical findings further demonstrate the direct developmental significance of Economic Capacity. Correlation analysis revealed a strong positive relationship between Economic Complexity and Planetary-adjusted Human Development ($r = .6430$, $p < .001$). Similarly, the Structural Equation Model estimated a positive and highly significant pathway from Economic Complexity to PHDI ($\beta = .048$, $p < .001$).

These results indicate that countries possessing greater productive sophistication consistently outperform countries with less sophisticated productive systems in achieving sustainable human development outcomes. Productive knowledge, technological capability, and economic complexity therefore emerge as critical determinants of sustainable development.

The developmental significance of Economic Capacity lies not merely in its ability to generate wealth but in its ability to generate wealth in ways that support long-term human flourishing. Sophisticated productive systems create opportunities for innovation, support higher-quality employment, generate greater fiscal capacity, and reduce dependence on environmentally destructive production patterns. Economic Capacity therefore serves as the mechanism through which economic activity becomes both productive and sustainable.

5.5 From Extractive Productivity to Generative Productivity

The third stage of the Capability Transformation Model is therefore the transformation of Economic Capacity from extractive productivity to generative productivity.

This transition represents far more than economic diversification. It involves a fundamental transformation in how societies create value. Under extractive productivity, value creation relies primarily on the exploitation of existing resources. Under generative productivity, value creation increasingly depends upon knowledge creation, capability accumulation, innovation, and productive sophistication.

The findings of this study suggest that this transformation represents the final productive step required before sustainable development can emerge. Social Capacity provides direction. Political Capacity provides coordination. Economic Capacity provides realization. Through Economic Capacity, societal aspirations and institutional effectiveness are translated into tangible improvements in human welfare.

Accordingly, the third stage of capability transformation may be summarized as:

Extractive Productivity → Generative Productivity

This transformation completes the sequence linking Social Capacity and Political Capacity to Sustainable Development. Societies that successfully develop generative productivity become increasingly capable of generating prosperity, resilience, innovation, inclusion, and sustainability simultaneously. The next section examines how these successful transformations culminate in the achievement of Ever-Flourishing Human Conditions.

6. Empirical Validation of the Capability Transformation Model

The Capability Transformation Model proposes that sustainable development emerges through a sequential process in which Social Capacity generates Political Capacity, Political Capacity generates Economic Capacity, and Economic Capacity subsequently produces sustainable human development. The validity of this proposition depends on whether empirical evidence supports the existence of such a developmental sequence. To evaluate this proposition, the model was examined using a balanced panel dataset comprising 132 countries observed over the period 2002–2023. The empirical strategy combined correlation analysis, dynamic panel estimation, causal mediation analysis, and Structural Equation Modelling (SEM) to evaluate both the individual relationships and the complete sequential pathway linking the three capacities to sustainable development.

Unlike many development studies that focus on isolated relationships among governance, productive capability, and development outcomes, the present analysis examined the entire developmental sequence simultaneously. The objective was not merely to determine whether the variables are related, but whether they operate as components of a connected capability transformation process.

6.1 Validation of the Social Capacity–Political Capacity Relationship

The first proposition of the Capability Transformation Model argues that Social Capacity constitutes the developmental foundation of Political Capacity. Empirically, Social Capacity

was represented by Voice and Accountability, while Political Capacity was represented by Government Effectiveness.

The evidence provides strong support for this proposition. The correlation analysis revealed a strong positive association between Voice and Accountability and Government Effectiveness ($r = .8076$, $p < .001$), indicating that societies characterized by stronger civic participation, accountability, freedom of expression, and public engagement tend to exhibit higher levels of institutional effectiveness.

The Structural Equation Model further confirmed this relationship. The estimated path between Voice and Accountability and Government Effectiveness was positive and statistically significant ($\beta = .450$, $p < .001$). This result indicates that improvements in Social Capacity contribute substantially to improvements in Political Capacity.

The dynamic panel analysis offers additional support. Government Effectiveness exhibited strong institutional persistence, with lagged Government Effectiveness producing a coefficient of $\beta = .7209$ ($p < .001$). This finding suggests that Political Capacity functions as an accumulative developmental asset whose effectiveness strengthens over time. At the same time, Voice and Accountability exerted a statistically significant influence on Government Effectiveness, confirming that institutional quality is shaped not only by administrative processes but also by the quality of societal engagement.

Taken together, these findings provide empirical support for the proposition that Political Capacity emerges from Social Capacity rather than existing independently of society. Effective governance therefore appears to be rooted in the social foundations of accountability, participation, and collective action.

6.2 Validation of the Political Capacity–Economic Capacity Relationship

The second proposition of the Capability Transformation Model argues that Political Capacity functions as the mechanism through which Social Capacity is converted into Economic Capacity.

The empirical evidence provides substantial support for this proposition. Correlation analysis revealed a strong positive relationship between Government Effectiveness and Economic Complexity ($r = .7939$, $p < .001$), suggesting that countries with stronger institutional capability tend to possess more sophisticated productive structures.

The structural model produced similar results. Government Effectiveness exerted a positive and highly significant influence on Economic Complexity ($\beta = .457$, $p < .001$). This finding indicates that Political Capacity contributes directly to the accumulation of productive knowledge, industrial sophistication, and technological capability.

More importantly, the mediation analysis demonstrated that Political Capacity functions as a developmental converter linking Social Capacity and Economic Capacity. The Average Causal Mediation Effect remained positive and highly significant (ACME = 0.2056, $p < .001$), while Government Effectiveness mediated approximately 65.39% of the total effect of Voice and Accountability on Economic Complexity.

The magnitude of this mediation effect is theoretically significant. It indicates that civic participation, public accountability, and societal engagement do not generate productive

sophistication directly. Rather, they become economically meaningful when converted into effective institutions capable of coordinating resources, implementing policy, supporting innovation, and facilitating industrial learning.

These findings therefore validate the central role assigned to Political Capacity within the Capability Transformation Model. Political Capacity is not merely another determinant of development; it is the primary mechanism through which societal aspirations become productive capabilities.

6.3 Validation of the Economic Capacity–Sustainable Development Relationship

The third proposition of the Capability Transformation Model argues that Economic Capacity functions as the mechanism through which Political Capacity is transformed into sustainable development outcomes.

The empirical evidence strongly supports this proposition. Economic Complexity exhibited a substantial positive correlation with Planetary-adjusted Human Development ($r = .6430$, $p < .001$), indicating that countries possessing more sophisticated productive structures tend to achieve higher levels of sustainable human development.

The Structural Equation Model produced a similar result. Economic Complexity exerted a positive and statistically significant influence on PHDI ($\beta = .048$, $p < .001$). This finding demonstrates that productive sophistication, technological capability, and knowledge-intensive production contribute directly to sustainable human development.

The most significant finding, however, emerged from the mediation analysis. Government Effectiveness exhibited a negative direct effect on PHDI ($\beta = -0.0185$, $p < .001$). Likewise, the Structural Equation Model revealed a negative direct pathway between Government Effectiveness and Sustainable Development ($\beta = -0.041$, $p < .001$). These results suggest that Political Capacity alone does not automatically generate sustainable development.

When the indirect pathway through Economic Complexity was considered, however, the effect became positive and highly significant ($\beta = 0.0279$, $p < .001$). Furthermore, the mediation proportion reached 297.76%, indicating the presence of a complete suppressor effect.

This finding represents one of the most important empirical contributions of the study. It suggests that Economic Capacity fundamentally alters the developmental consequences of Political Capacity. Effective governments operating within relatively simple or extractive productive systems may generate economic growth while simultaneously producing ecological pressures that undermine sustainable development. By contrast, effective governments operating within sophisticated, knowledge-intensive productive systems contribute positively to sustainable human flourishing.

Economic Capacity therefore performs a transformative function. It converts governance capability into sustainable development by redirecting economic activity toward productive sophistication, innovation, technological upgrading, and higher-value production.

6.4 Validation of the Complete Capability Transformation Sequence

The strongest test of the Capability Transformation Model lies not in the individual relationships but in the complete developmental sequence linking Social Capacity, Political Capacity, Economic Capacity, and Sustainable Development.

The Structural Equation Model confirmed statistically significant pathways throughout the entire developmental system. Voice and Accountability significantly strengthened Government Effectiveness ($\beta = .450$, $p < .001$). Government Effectiveness significantly enhanced Economic Complexity ($\beta = .457$, $p < .001$). Economic Complexity significantly improved Planetary-adjusted Human Development ($\beta = .048$, $p < .001$).

Most importantly, the complete sequential pathway linking Voice and Accountability to Government Effectiveness, Government Effectiveness to Economic Complexity, and Economic Complexity to Planetary-adjusted Human Development remained positive and statistically significant ($\beta = .010$, $p < .001$).

The overall model demonstrated exceptional fit, with a Comparative Fit Index (CFI) of 1.000, a Tucker-Lewis Index (TLI) of 1.000, a Root Mean Square Error of Approximation (RMSEA) of .000, and a Standardized Root Mean Square Residual (SRMR) of .000. These fit statistics indicate a very strong correspondence between the theoretical structure of the Capability Transformation Model and the observed empirical evidence.

6.5 The Empirical Significance of Sequential Capability Transformation

Collectively, the results provide robust support for the central proposition advanced in this paper. Sustainable development does not emerge directly from Social Capacity, Political Capacity, or Economic Capacity operating independently. Rather, development emerges through their sequential interaction.

The evidence suggests that Social Capacity creates the civic foundations necessary for effective governance. Political Capacity converts these social capabilities into institutional effectiveness. Economic Capacity subsequently transforms institutional effectiveness into sustainable human development. Development therefore appears to operate as a process of capability transformation rather than a process of simple resource accumulation.

The empirical findings consequently support the broader argument that sustainable development is best understood as the manufactured outcome of a sequential developmental system. The progression from Social Capacity to Political Capacity, from Political Capacity to Economic Capacity, and from Economic Capacity to Sustainable Development provides empirical validation for the Capability Transformation Model and establishes sequential capability transformation as a viable explanation of sustainable human flourishing.

7. From Capability Transformation to Ever-Flourishing Human Conditions

The Capability Transformation Model culminates in a developmental condition described as Ever-Flourishing Human Conditions. This concept represents the ultimate outcome of successful transformation across the social, political, and economic spheres of society. While conventional development theories frequently treat economic growth as the endpoint of development, the Capability Transformation Model argues that growth is merely an

intermediate outcome. The ultimate purpose of development is the achievement and sustenance of human flourishing within ecological limits.

This perspective aligns with the capability approach advanced by Sen (1999), which emphasizes the expansion of human freedoms and opportunities as the true objective of development. It also resonates with the human development tradition, which regards development as the enlargement of people's choices and capabilities rather than the mere accumulation of income. However, the Capability Transformation Model extends these perspectives by offering a sequential explanation of how such outcomes are generated and sustained over time.

Within this framework, Ever-Flourishing Human Conditions refer to a developmental state characterized by high and sustainable levels of human well-being, productive opportunity, institutional resilience, social inclusion, environmental sustainability, and intergenerational prosperity. Such conditions exist when societies continuously improve the quality of life of their populations without imposing developmental costs on future generations. Sustainable development therefore becomes a dynamic condition of ongoing human advancement rather than a static developmental endpoint.

7.1 Beyond Economic Growth as a Measure of Development

A fundamental implication of the Capability Transformation Model is that economic growth should not be confused with sustainable development. Economic expansion remains important because productive activity creates the resources necessary for improving living standards. However, growth alone cannot guarantee sustained improvements in human well-being.

Many countries have experienced prolonged periods of economic growth while simultaneously facing declining institutional effectiveness, rising inequality, environmental degradation, social conflict, and developmental fragility. Similarly, some countries with substantial natural resources have generated significant wealth without achieving broad-based human development. These experiences suggest that economic growth and sustainable development are related but conceptually distinct phenomena.

The empirical findings of this study reinforce this conclusion. The results demonstrated that Political Capacity alone does not automatically generate sustainable development outcomes. Government Effectiveness exhibited a negative direct effect on Planetary-adjusted Human Development in both the mediation model ($\beta = -0.0185$, $p < .001$) and the Structural Equation Model ($\beta = -0.041$, $p < .001$). These findings indicate that even effective governments may facilitate forms of growth that remain environmentally intensive or institutionally unsustainable.

The implication is that growth, governance, and development cannot be assumed to move together automatically. The quality of productive structures and the nature of capability transformation ultimately determine whether growth contributes to sustainable human flourishing.

7.2 The Developmental Significance of Productive Sophistication

One of the most important findings of the study is that Economic Capacity functions as the mechanism through which governance capability becomes sustainable development. This

finding helps explain why countries possessing similar governance capabilities frequently achieve different development outcomes.

The mediation analysis revealed a positive and highly significant indirect effect of Government Effectiveness on Planetary-adjusted Human Development operating through Economic Complexity ($\beta = 0.0279$, $p < .001$). Moreover, the suppressor effect of 297.76% indicates that productive sophistication fundamentally alters the developmental consequences of governance capability.

This result suggests that the pathway to sustainable development depends less on administrative efficiency alone and more on the extent to which governance systems foster technological upgrading, innovation, industrial diversification, and productive knowledge accumulation. Productive sophistication therefore emerges as a necessary condition for translating institutional effectiveness into sustainable human well-being.

The significance of this finding extends beyond the economic sphere. It demonstrates that sustainable development is ultimately a capability-driven phenomenon. Nations achieve durable development outcomes not because they possess greater resources, but because they possess stronger capabilities for creating and continuously upgrading productive knowledge.

7.3 Ever-Flourishing Human Conditions as a Higher-Order Developmental State

The concept of Ever-Flourishing Human Conditions represents the highest-order developmental state within the Capability Transformation Model. It is the condition that emerges when higher-order Social Capacity, Political Capacity, and Economic Capacity simultaneously reinforce one another.

At the social level, flourishing societies exhibit high levels of civility, trust, accountability, cooperation, and responsible citizenship. At the political level, flourishing societies possess effective governance systems capable of coordinating collective action, delivering public goods, and supporting long-term development. At the economic level, flourishing societies maintain productive systems characterized by innovation, technological adaptation, productive sophistication, and continuous capability accumulation.

The interaction of these capacities generates developmental resilience. Economic prosperity becomes more inclusive, institutions become more responsive, and societies become more capable of adapting to social, technological, and environmental change. Sustainable development thus becomes self-reinforcing because improvements within one sphere strengthen capabilities within the others.

This perspective helps explain why some countries consistently maintain high levels of development while others experience cyclical periods of progress and decline. The determining factor is not simply income or economic structure but the degree to which developmental capacities have been institutionalized across society.

7.4 The Capability Transformation Sequence

The Capability Transformation Model proposes that sustainable development emerges through a sequence of capability transitions operating across the social, political, and economic spheres.

The process begins with the transformation of Social Capacity from barbarism to civility. This transition creates the trust, accountability, participation, and collective orientation necessary for effective governance. Political Capacity subsequently evolves from predatory governance to developmental governance, enabling institutions to convert societal aspirations into coordinated developmental action. Economic Capacity then progresses from extractive productivity to generative productivity, allowing economies to generate increasing value through productive knowledge, innovation, and technological sophistication.

The empirical evidence provides strong support for this sequence. Social Capacity significantly strengthened Political Capacity ($\beta = .450$, $p < .001$), Political Capacity significantly enhanced Economic Capacity ($\beta = .457$, $p < .001$), and Economic Capacity significantly improved Sustainable Development ($\beta = .048$, $p < .001$). Furthermore, the complete sequential pathway remained positive and statistically significant ($\beta = .010$, $p < .001$). Collectively, these findings indicate that sustainable development emerges through the interaction of capacities rather than through isolated developmental factors.

The developmental pathway proposed by the Capability Transformation Model may therefore be summarized as:

Barbarism → Civility → Developmental Governance → Generative Productivity → Ever-Flourishing Human Conditions

This sequence captures the central logic of the model. Sustainable development is neither accidental nor inevitable. It emerges through deliberate and cumulative transformations in the quality of societal, institutional, and productive capabilities.

7.5 The Capability Classification Matrix

A practical implication of the Capability Transformation Model is that countries can be classified according to the maturity of their Social Capacity, Political Capacity, and Economic Capacity rather than solely by income levels or conventional development indicators. Existing classification systems typically categorize countries as low-income, lower-middle-income, upper-middle-income, or high-income economies. While useful for measuring economic performance, such classifications provide limited insight into the underlying capabilities that generate sustainable development outcomes.

The empirical findings of this study suggest that countries differ not merely in the level of resources they possess but in the quality and maturity of their developmental capacities. Social Capacity, Political Capacity, and Economic Capacity collectively determine the extent to which societies can produce sustainable human flourishing. Accordingly, the study proposes a Capability Classification Matrix (CCM) as a diagnostic framework for distinguishing developmental stages across countries.

The Capability Classification Matrix is derived directly from the validated developmental sequence linking Voice and Accountability, Government Effectiveness, Economic Complexity, and Planetary-adjusted Human Development. The matrix classifies countries according to the extent to which they have transformed lower-order capacities into higher-order capabilities.

Table 7.1

Capability Classification Matrix

Developmental Order	Dominant Characteristic	Social Capacity	Political Capacity	Economic Capacity	Sustainable Development Outcome
Order I	Capability Trap Systems	Barbarism	Predatory Governance	Extractive Productivity	Low Human Flourishing
Order II	Civic Transition Systems	Emerging Civility	Weak Developmental Governance	Limited Productive Sophistication	Moderate Human Development
Order III	Developmental Governance Systems	Civility	Developmental Governance	Emerging Productive Sophistication	Rising Human Flourishing
Order IV	Generative Productivity Systems	Advanced Civility	Strong Developmental Governance	Generative Productivity	High Sustainable Development
Order V	Ever-Flourishing Systems	Mature Civility	Mature Developmental Governance	Advanced Generative Productivity	Ever-Flourishing Human Conditions

Source: Developed from the Capability Transformation Model.

The first category consists of Capability Trap Systems. These societies remain characterized by lower-order manifestations of all three capacities. Social relationships are dominated by exclusionary and zero-sum interactions, governance remains largely predatory, and productive systems rely heavily on resource extraction or low-value economic activity. Such countries tend to record low levels of sustainable development because weaknesses in each sphere reinforce one another.

The second category consists of Civic Transition Systems. These societies have begun to develop higher levels of Social Capacity through increased accountability, civic participation, and public engagement. However, Political Capacity remains relatively weak and productive systems remain underdeveloped. As a result, social aspirations often exceed institutional and productive capabilities.

The third category comprises Developmental Governance Systems. These countries have developed stronger governance institutions capable of converting societal demands into coordinated developmental action. Productive sophistication remains moderate, but institutional capability increasingly supports structural transformation.

The fourth category consists of Generative Productivity Systems. These societies possess relatively mature Social Capacity and Political Capacity and have developed sophisticated productive structures characterized by technological capability, innovation, industrial

diversification, and productive complexity. Such countries typically achieve high levels of sustainable development.

The fifth category represents Ever-Flourishing Systems, which correspond to the highest developmental state within the Capability Transformation Model. These societies successfully align mature forms of Social Capacity, Political Capacity, and Economic Capacity. Productive prosperity, institutional resilience, social inclusion, and environmental sustainability become mutually reinforcing. Consequently, such countries are most likely to achieve sustained human flourishing within planetary boundaries.

The Capability Classification Matrix extends conventional development classifications by shifting attention from income levels to capability maturity. Within this framework, development is understood not as a destination defined by wealth but as a progression through successive stages of capability transformation. Countries therefore advance not merely by accumulating resources but by transforming the quality of their social relationships, governance systems, and productive structures.

In practical terms, the matrix provides policymakers with a diagnostic tool for identifying developmental bottlenecks. Countries trapped at lower developmental orders require different interventions from countries that have already developed strong governance systems but require further productive sophistication. The matrix therefore translates the Capability Transformation Model into an operational framework capable of guiding development strategy and policy prioritization.

By introducing the Capability Classification Matrix, the study provides a bridge between theory and practice. The matrix enables researchers, policymakers, and development practitioners to locate countries within the capability transformation process and to identify the next capability transition required for progress toward Ever-Flourishing Human Conditions.

7.6 Ever-Flourishing Human Conditions and Sustainable Development

The concept of Ever-Flourishing Human Conditions provides a broader interpretation of sustainable development than is commonly employed in development economics. Conventional approaches frequently focus on economic growth, poverty reduction, environmental sustainability, or human development as separate objectives. The Capability Transformation Model integrates these objectives within a single developmental framework.

Sustainable development is therefore understood as a condition in which societies continuously expand opportunities for human flourishing while maintaining the institutional, productive, and ecological capacities necessary to sustain those opportunities over time. It is not merely the presence of prosperity but the ability to reproduce prosperity sustainably across generations.

The empirical results of this study suggest that such outcomes are most likely to emerge when societies successfully transform lower-order capacities into higher-order capacities across all developmental spheres. Consequently, sustainable development is revealed not as a naturally occurring consequence of growth but as a manufactured outcome arising from the sequential transformation of Social Capacity, Political Capacity, and Economic Capacity.

Within the Capability Transformation Model, Ever-Flourishing Human Conditions therefore represent both the destination and the ultimate validation of successful capability

transformation. They constitute the highest expression of sustainable development and the strongest evidence that a society has successfully aligned its social systems, governance institutions, and productive structures toward the advancement of human flourishing within planetary boundaries.

8. Implications for Development Theory and Policy and Conclusion

8.1 Implications for Development Theory

The Capability Transformation Model contributes to development theory by offering a new explanation of how sustainable development emerges. Whereas conventional growth theories primarily explain how economies expand through capital accumulation, technological progress, and productivity improvements (Romer, 1990; Solow, 1956), the present framework seeks to explain how societies transform economic growth into sustainable human flourishing. The model therefore shifts the primary unit of analysis from economic expansion to capability transformation.

A central implication of the model is that sustainable development should not be understood as the direct outcome of economic growth, institutional quality, or productive sophistication operating independently. Rather, development emerges through a sequential process in which Social Capacity, Political Capacity, and Economic Capacity interact and reinforce one another over time. The empirical evidence generated by this study provides substantial support for this interpretation. Social Capacity significantly strengthened Political Capacity ($\beta = .450$, $p < .001$), Political Capacity significantly enhanced Economic Capacity ($\beta = .457$, $p < .001$), and Economic Capacity significantly improved Sustainable Development ($\beta = .048$, $p < .001$). Furthermore, Political Capacity mediated 65.39% of the relationship between Social Capacity and Economic Capacity, while Economic Capacity generated a suppressor effect of 297.76% on the relationship between Political Capacity and Sustainable Development. Collectively, these findings suggest that development operates through sequential capability transformation rather than through isolated developmental factors.

The model also extends the literature on structural transformation. Traditional approaches generally define structural transformation as the movement of labour and resources from low-productivity sectors to higher-productivity sectors (Chenery, 1960; Kuznets, 1966; Lewis, 1954). The empirical findings presented in this study suggest that such a definition captures only part of the developmental process. While sectoral shifts remain important, sustainable development ultimately depends on the transformation of societal capabilities. Structural transformation therefore extends beyond economic restructuring and encompasses the upgrading of social relationships, governance institutions, and productive systems.

This reconceptualization contributes to several strands of development scholarship simultaneously. It connects institutional economics, capability theory, economic complexity theory, and sustainable development within a single explanatory framework. Institutional economists emphasize the role of governance and institutions (Acemoglu & Robinson, 2012; North, 1990). Capability theorists emphasize human freedom and agency (Sen, 1999). Economic complexity scholars emphasize productive sophistication and knowledge accumulation (Hausmann et al., 2014; Hidalgo & Hausmann, 2009). The Capability Transformation Model demonstrates how these perspectives may be viewed not as competing explanations but as interconnected stages within a broader developmental process.

The findings also have implications for governance research. A long-standing assumption within governance literature is that stronger state capability necessarily improves development outcomes. The present study challenges this assumption. The negative direct effect of Government Effectiveness on Planetary-adjusted Human Development ($\beta = -0.041$, $p < .001$) demonstrates that effective governance alone does not guarantee sustainable development. Governance capability becomes developmentally meaningful only when it contributes to the creation of sophisticated productive capabilities. Consequently, governance should be evaluated not only according to its effectiveness but also according to its ability to facilitate productive transformation.

More broadly, the model suggests that societies differ in development outcomes because they differ in the quality and maturity of their capabilities. Development therefore becomes a process through which lower-order capacities are progressively transformed into higher-order capacities. The central challenge is not simply creating wealth but creating the capabilities required to sustain flourishing societies over time.

8.2 Policy Implications

The empirical findings of this study generate important implications for development policy. If sustainable development is the manufactured outcome of sequential capability transformation, then development policy should focus on strengthening Social Capacity, Political Capacity, and Economic Capacity in a coordinated manner.

The first implication concerns Social Capacity. The findings demonstrate that the quality of societal relationships significantly influences the quality of governance institutions. Countries seeking sustainable development should therefore devote greater attention to strengthening civic participation, accountability, transparency, public trust, responsible citizenship, and social cooperation. These factors are often viewed as desirable social outcomes in themselves. The findings of this study suggest that they should also be viewed as developmental investments because they generate the societal conditions necessary for effective governance.

The second implication concerns Political Capacity. Governments frequently pursue administrative reforms aimed at improving efficiency, reducing corruption, and strengthening public service delivery. Such reforms remain important. However, the findings indicate that governance effectiveness alone is insufficient to generate sustainable development. Developmental governance must be oriented toward facilitating productive transformation. Governments should therefore focus not only on becoming more effective administrators but also on becoming more effective coordinators of innovation, technological upgrading, industrial diversification, and capability accumulation.

The third implication concerns Economic Capacity. The empirical results demonstrate that productive sophistication performs a decisive developmental role. Consequently, development strategies should prioritize the accumulation of productive knowledge rather than merely increasing economic output. Policies that support innovation systems, technological learning, research and development, advanced manufacturing, digital capabilities, human capital formation, and productive diversification are likely to generate more sustainable development outcomes than strategies focused exclusively on short-term growth.

The findings also suggest that development interventions should be designed sequentially rather than independently. Social reforms that strengthen civic accountability create the conditions

necessary for stronger Political Capacity. Improvements in Political Capacity subsequently facilitate the development of Economic Capacity. Economic Capacity ultimately generates sustainable human development. Development policy should therefore be viewed as a capability-building process rather than a collection of isolated sectoral interventions.

The Capability Transformation Model further implies that societies seeking sustainable development should intentionally pursue three interconnected transitions: from barbarism to civility, from predatory governance to developmental governance, and from extractive productivity to generative productivity. These transformations represent the social, political, and economic foundations of sustainable development. Countries that successfully achieve these transitions become increasingly capable of generating prosperity, resilience, inclusion, sustainability, and long-term human flourishing.

8.3 Conclusion

This paper has advanced the Capability Transformation Model of Sustainable Development as a new framework for understanding how nations achieve sustainable human flourishing. The model emerged from the recognition that existing development theories provide only partial explanations of sustainable development. Growth theories explain economic expansion, institutional theories explain governance quality, capability theories explain human well-being, and economic complexity theories explain productive sophistication. However, none fully explains how these dimensions interact within a sequential developmental process.

The central argument of this paper is that sustainable development is not an automatic consequence of economic growth. Rather, it is a manufactured outcome arising from the sequential transformation of Social Capacity, Political Capacity, and Economic Capacity. Social Capacity establishes the societal foundations of development through civility, accountability, trust, and collective purpose. Political Capacity converts these social capabilities into effective institutions and coordinated developmental action. Economic Capacity subsequently transforms institutional effectiveness into productive sophistication, innovation, and sustainable prosperity.

The empirical evidence strongly supports this developmental sequence. Social Capacity significantly influenced Political Capacity ($\beta = .450$, $p < .001$), Political Capacity significantly influenced Economic Capacity ($\beta = .457$, $p < .001$), and Economic Capacity significantly contributed to Sustainable Development ($\beta = .048$, $p < .001$). Political Capacity mediated approximately 65.39% of the relationship between Social Capacity and Economic Capacity, while Economic Capacity transformed the otherwise negative developmental effect of Political Capacity through a suppressor effect of 297.76%. Most importantly, the complete sequential pathway remained positive and statistically significant ($\beta = .010$, $p < .001$), providing strong support for the proposed model.

The paper therefore proposes a new interpretation of structural transformation. Rather than viewing transformation primarily as a sectoral phenomenon, structural transformation is conceptualized as a process of sequential capability upgrading. Development occurs when societies progressively transform lower-order capabilities into higher-order capabilities. The resulting developmental pathway may be summarized as:

Barbarism → Civility → Developmental Governance → Generative Productivity → Ever-Flourishing Human Conditions

This sequence captures the central contribution of the Capability Transformation Model. Sustainable development is neither accidental nor inevitable. It is the outcome of cumulative transformations in the quality of societal, institutional, and productive capabilities. Societies that successfully achieve these transformations become increasingly capable of generating prosperity, resilience, inclusion, ecological sustainability, and intergenerational flourishing.

Accordingly, the paper concludes that the path to sustainable development lies not merely in creating wealth but in transforming the capacities through which societies create, govern, and sustain that wealth. Sustainable development is therefore best understood as the manufactured outcome of the sequential transformation of Social Capacity, Political Capacity, and Economic Capacity into Ever-Flourishing Human Conditions.

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