Beyond GDP: Reimagining Economic Value through Complexity, Relational Sociology, and Post-Growth Political Economy

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Article

Beyond GDP: Reimagining Economic Value through Complexity, Relational Sociology, and Post-Growth Political Economy

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Abstract

This article examines the growing inadequacy of Gross Domestic Product (GDP) as a measure of human progress in a world shaped by ecological fragility, socio-technical transformations, and civilizational transitions. While GDP served as a convenient post-war metric for national accounting, it now obscures critical dimensions of wellbeing, including ecological sustainability, relational capabilities, and systemic resilience. Drawing from complexity economics, relational sociology, and post-growth political economy, the article proposes a renewed understanding of value as emergent, interconnected, and ecologically embedded. Complexity economics demonstrates that economies are not linear production machines but adaptive systems shaped by feedback loops, cooperation, and innovation. Relational perspectives from Sen, Nussbaum, and Appadurai highlight capabilities, agency, and aspiration as fundamental components of wellbeing beyond monetary aggregates. Post-growth scholarship—including recent contributions from Hickel, Raworth, and Stiglitz—calls for civilizational metrics aligned with planetary boundaries and distributive justice. The article synthesizes these paradigms to propose a multidimensional framework integrating ecological boundaries, relational wellbeing, and systemic capabilities. Special attention is given to Africa and the Global South, where informal economies, urban complexity, and community resilience constitute fertile ground for post-GDP experimentation. Overall, the analysis argues that moving beyond GDP is not merely a technical adjustment but a civilizational shift toward a regenerative, capability-enhancing, and complexity-aware understanding of prosperity fit for the twenty-first century.

Keywords: post-GDP metrics; complexity economics; relational value; capabilities approach; post-growth; planetary boundaries; well-being indicators; emergence; Global South; political economy

Introduction

For over seventy years, Gross Domestic Product (GDP) has functioned as the primary metric for evaluating economic performance, shaping policy decisions, and guiding global governance (Kuznets, 1934; Stiglitz, Sen, & Fitoussi, 2010). Originally developed as a post-war accounting tool, GDP was designed to measure aggregate economic output rather than human wellbeing, ecological health, or social cohesion. While this metric proved useful for tracking industrial expansion, its assumptions reflect a narrow, reductionist ontology in which value is equated with market transactions and material production (Fioramonti, 2017).

The contemporary world, however, has outgrown the constraints of GDP. Socio-ecological instability, climate crises, biodiversity loss, and digital transformations reveal the inadequacy of a metric that ignores relational, ecological, and cultural dimensions of prosperity (Raworth, 2023; Hickel, 2020). Modern economies are better understood as **complex adaptive systems**, where value emerges through interactions between social networks, technological infrastructures, ecological services, and cultural-psychological dynamics (Arthur, 2015; Beinhocker, 2006). GDP fails to capture

 doi:10.20944/preprints202512.0349.v1

these emergent properties, thereby obscuring both the regenerative and destructive effects of economic activity on communities and ecosystems (Stiglitz et al., 2010).

Moreover, GDP carries deep philosophical, historical, and political implications. It embodies an industrial-modernist worldview privileging growth over sustainability, individualism over relationality, and extraction over ecological stewardship (Escobar, 2018). Historically, GDP emerged from a post-war growth paradigm that prioritized material expansion and industrial capacity, often at the expense of long-term environmental and social resilience (Kuznets, 1934; Fioramonti, 2017). Anthropologically, GDP overlooks the diverse ways communities, particularly in Africa and the Global South, generate value through informal economies, kinship networks, care work, spiritual practices, and reciprocal exchanges (Appadurai, 2007; Charmes, 2018; Skinner, 2020). Ecologically, it fails to distinguish between activities that regenerate life systems and those that degrade planetary boundaries (Rockström et al., 2009; Steffen et al., 2015). Politically, GDP-centric policies incentivize extractive development even when such practices undermine long-term social and environmental wellbeing (Hickel, 2020).

In response, a growing body of scholarship in complexity economics, relational sociology, and post-growth political economy calls for a reimagining of economic value that is emergent, interconnected, and ecologically embedded (Arthur, 2015; Raworth, 2023; Sen, 1999; Nussbaum, 2011). Complexity economics emphasizes feedback loops, adaptive dynamics, and innovation as central to economic systems, while relational approaches foreground capabilities, agency, and social aspiration beyond monetary aggregates (Sen, 1999; Nussbaum, 2011; Appadurai, 2007). Post-growth scholars advocate for civilizational metrics aligned with planetary boundaries, distributive justice, and the long-term capacity of human and ecological systems to flourish (Hickel, 2020; Raworth, 2023; Stiglitz et al., 2010 ; Jackson, 2019, 2021).

This article contributes to this emerging literature by proposing an integrated post-GDP framework that synthesizes these paradigms into a multidimensional understanding of prosperity. Special attention is given to Africa and the Global South, where informal economies, urban complexity, and community resilience constitute fertile grounds for experimentation with alternative indicators of wellbeing. By moving beyond GDP, this framework envisions a civilizational shift toward regenerative, capability-enhancing, and complexity-aware approaches to development that reflect the interdependence of ecological, social, and cultural systems.

1. The Limits of GDP as a Measure of Human Progress

Gross Domestic Product (GDP) was developed as a pragmatic tool for national accounting in a specific historical conjuncture: a mid-twentieth century world dominated by industrial production, territorially bounded economies, and policy priorities focused on rebuilding post-war productive capacity (Kuznets, cited historically in Stiglitz, Fitoussi, & Durand, 2018). Yet GDP's ongoing hegemony as the principal proxy for national success now obscures more than it reveals. Two linked claims structure the critique advanced here. First, GDP systematically misrepresents the composition and welfare consequences of contemporary economic activity. Second, the political performativity of GDP turns measurement into governance: states and markets increasingly organise social life to maximize what is measured (Porter, 1995; Stiglitz et al., 2018). The remainder of this section elaborates these claims across historical, empirical, methodological, and political dimensions.

1.1. Historical Origins and Epistemic Biases

GDP's intellectual genealogy is crucial for understanding its blind spots. Conceived in the context of statist industrial economies and institutionalized during the Cold War and post-war reconstruction, GDP was never meant to be a comprehensive index of human flourishing (Stiglitz et al., 2018). Simon Kuznets—often credited with the conceptual foundations of national income accounting—himself cautioned that measures of production should not be conflated with measures of welfare (Stiglitz et al., 2018). Nevertheless, GDP's early adoption by governments and international organizations transformed it into a metric that did double duty: a statistical instrument and a political

 doi:10.20944/preprints202512.0349.v1

target. That dual role embedded normative assumptions—namely, that aggregated market production approximates public welfare and that growth is the primary policy objective (Stiglitz et al., 2018; EU Issues Paper, 2021).

These assumptions have several epistemic consequences. GDP privileges monetized market transactions and sidelines nonmarket labour (notably reproductive and care work), subsistence production, commons-based provisioning, and cultural practices of value creation (UNDP HDR, 2024). In many African economies, for example, a significant share of livelihood and reciprocal provisioning occurs outside formal market channels; GDP thus systematically undervalues both the scale and the welfare contribution of informal and communal economies (UNCTAD, 2021; Fredriksson, 2021). Moreover, GDP treats all output as homogeneous units that can be aggregated without distinction between activities that sustain long-term wellbeing (e.g., education, ecosystem restoration) and activities that deplete long-term productive bases (e.g., strip mining, deforestation)—a problem known as the failure to account for capital depreciation in ecological and social terms (IPCC, 2022; Hickel, 2021).

1.2. Empirical Limitations: What GDP Misses and Why It Matters

Empirically, the limits of GDP are stark. First, GDP rises with many types of destructive activity because expenditures associated with cleanup, medical care, or resource extraction increase monetary flows even as social and ecological capital erode (Stiglitz et al., 2018). Natural disasters, for example, bring surge spending that raises measured GDP while actual welfare and capital stocks decline—an effect that distorts policy incentives (IPCC, 2022). Second, GDP is a poor proxy for distributional outcomes. Aggregate output can grow while inequality deepens, leaving large segments of society worse off in terms of capability and security (UNDP HDR, 2024; World Happiness Report, 2023). Third, GDP fails to register the value generated within digital and platform economies that hinge on data, open-source collaboration, and network effects. Value created by algorithms, user-generated content, and collective knowledge often does not translate directly into formal GDP accounts; simultaneously, the capture of data value by a handful of global platforms introduces enormous rents and cross-border value flows that GDP-based national policies cannot easily address (UNCTAD, 2021; Sadowski, 2019/2020 ; Moleka, 2025a).

A fourth empirical omission is ecological service flows. Ecosystem services—pollination, soil fertility, water filtration, carbon sequestration—constitute real flows of value to human societies but are either external to GDP or only counted when commodified or destroyed. The IPCC and IPBES reports repeatedly document how biodiversity loss and ecological degradation reduce the capacity of systems to provide services on which livelihoods and economies depend; these losses are invisible in national income aggregates unless converted into market transactions (IPCC, 2022; IPBES, 2019). Finally, important relational goods—trust, reciprocity, community cohesion, cultural continuity—are central determinants of subjective wellbeing and social resilience, yet they do not appear in GDP (World Happiness Report, 2023; OECD, 2024).

1.3. Methodological Constraints and the Problem of Aggregation

GDP's methodological design amplifies its conceptual limits. The single-figure aggregation of disparate goods and services assumes commensurability: the idea that units of output are fungible and thus legitimately summed into a single scalar. This is methodologically convenient but normatively hazardous. It collapses quality and context into quantity, masking the heterogeneous welfare implications of different types of production (Stiglitz et al., 2018). The linear arithmetic of GDP also fails to capture nonlinearity and threshold effects that characterize socio-ecological systems: small changes in an ecological variable can precipitate large system shifts that are invisible at the level of headline growth figures (IPCC, 2022; Rockström et al., 2009 as discussed in recent syntheses).

Moreover, national accounts typically undercount or impute value for unpaid care and household labour, an omission with clear gendered implications: economies with similar GDP per capita can have radically different distributions of care burdens and life chances (UNDP HDR, 2024).

 doi:10.20944/preprints202512.0349.v1

Aggregation masks heterogeneity across territories and social groups, producing a misleadingly simple narrative that growth benefits all. Finally, the temporal frame of GDP is short: quarterly and annual cycles privilege immediate flows over intergenerational stocks—precisely the timeframe mismatch that undermines stewardship of long-lived ecological and social capital.

1.4. Performative Effects: How GDP Shapes Policy and Practice

Indicators do not merely describe; they prescribe. The performativity thesis—well established in social science literature on measurement—posits that metrics actively structure incentives and practices (Mackenzie, 2004; Porter, 1995 ; Lee & Tosetto, 2024).). GDP is a paradigmatic example. Governments design fiscal and industrial policy to sustain GDP growth because political legitimacy, creditworthiness, and geopolitical standing are bound to growth metrics. International financial institutions and market actors also use GDP trajectories to price risk, allocate capital, and set conditionalities. These institutional dynamics create a self-reinforcing feedback loop: the centrality of GDP causes actors to prioritize activities that contribute to GDP even when those activities undermine broader wellbeing or ecological sustainability (Stiglitz et al., 2018; EU Issues Paper, 2021).

A corollary is that the political economy of measurement entrenches path dependencies. States and firms invested in growth-centric infrastructures—transport networks, export-oriented extractive industries, formal financial systems—face high inertia against metric reorientation. Changing the dominant indicator is therefore not merely a technical exercise in national accounting; it is a political act that confronts entrenched interests, discursive frames, and institutional incentives.

2. Complexity Economics and Emergent Value

Contemporary scholarship has increasingly converged on the insight that economies are not mechanical aggregates of individual optimization problems but complex adaptive systems (Arthur, Beinhocker, & Stanger, 2020; Balland et al., 2020). Complexity economics foregrounds interactions, path dependence, nonlinearity, and emergence—properties that radically alter how value should be conceptualized and measured. Where mainstream economics privileges equilibrium, well-defined markets, and representative agents, complexity perspectives emphasise network structure, heterogeneity, multiple equilibria, and evolutionary trajectories. The implications for measurement and policy are profound: indicators suited to aggregative equilibrium models (like GDP) are ill-equipped to capture emergent forms of value, systemic risk, and adaptive capacity.

2.1. From Equilibrium Models to Complex Adaptive Systems

Complexity economics draws on interdisciplinary insights—statistical physics, network theory, evolutionary biology, and computational modelling—to model economies as evolving networks of agents whose micro-interactions generate macro-patterns not deducible from agent-level assumptions (Arthur et al., 2020; Hidalgo, 2021). Empirically, this shift is visible in the study of innovation systems, urban agglomerations, and supply-chain fragility: productivity and value do not arise solely from the sum of inputs but from the configuration and quality of interactions (Balland et al., 2020). Path dependence matters: historical accidents, institutional legacies, and technological lock-ins channel future possibilities, meaning that identical policy inputs can yield divergent outcomes depending on systemic context.

Complexity thinking implies that policy design must attend to structure (network topology), diversity (heterogeneity of agents and practices), and feedback mechanisms. Simple aggregates obscure network centralities (e.g., nodes whose failure would cascade systemically), modularity (which enhances resilience), and redundancy (which supports adaptation). GDP's scalar simplicity eliminates these structural properties from view and thereby risks incentivizing policies that increase short-term throughput while reducing long-term systemic robustness.

 doi:10.20944/preprints202512.0349.v1

2.2. Emergent Value: Cooperation, Knowledge Spillovers, and Relational Goods

One of the most consequential conceptual moves enabled by complexity economics is to treat value as emergent—produced by interactions, not simply by summing individual outputs. Emergent value appears in multiple contemporary phenomena. Innovation ecosystems, for instance, produce value through tacit knowledge spillovers, trust networks, and serendipitous interactions in dense urban nodes—features poorly proxied by market transactions alone (Balland et al., 2020). Platform economies generate network externalities where the marginal value of an additional user is a function of the existing network; much of this network value accrues to platform owners and is not accurately captured in standard GDP entries (UNCTAD, 2021; Sadowski, 2019).

Relational goods—mutual aid, community safety, cultural participation—are also emergent: they require repeated interactions, institutions of reciprocity, and shared norms. These goods contribute to resilience, health outcomes, and adaptive capacity (World Happiness Report, 2023). Because emergent value is constituted by relational patterns and institutional settings, measurement systems must move beyond transaction counts to indicators of connectivity, trust, and institutional performance.

2.3. Eco-Complexity: Co-Evolving Socio-Ecological Systems

Complexity economics becomes especially consequential when integrated with ecological science. Socio-ecological systems are coupled complex systems: human economic dynamics shape ecological regimes and, reciprocally, ecological thresholds (e.g., biodiversity loss, soil degradation, altered hydrological cycles) restructure economic possibilities (IPCC, 2022; Rockström et al., 2009). In such coupled systems, critical transitions and tipping points can produce abrupt, nonlinear shifts—outcomes that GDP's smooth aggregates cannot anticipate or represent.

A practical implication is that value accounting must internalize the functioning of ecological networks. For example, the resilience of agroecosystems depends on networked soil microbial communities, pollinator populations, and diversified cropping systems. The provisioning and insurance value of these ecological relations are not priced in markets until failure occurs. Complexity-informed metrics therefore emphasize stocks and flows of natural capital, redundancy in ecosystem service provision, and indicators of ecological connectivity (IPCC, 2022; UNDP HDR, 2024).

2.4. Measurements Implications: Resilience, Diversity, and Network Metrics

If value is emergent and socio-ecological systems are inherently complex, measurement architectures must evolve accordingly. Several classes of indicators follow directly from complexity science and resilience theory.

First, resilience indicators must capture the *dynamic* properties of systems rather than static conditions. These include metrics such as recovery rates after disturbances, adaptive capacity, and the availability of buffer stocks—for instance, community-level water reserves or soil organic carbon that enhances long-term ecological stability (Folke et al., 2010; Walker & Salt, 2012).

Second, diversity indicators—both ecological and economic—become central. Diversity produces portfolio effects that reduce systemic risk, as heterogeneous landscapes and diversified local economies are less vulnerable to collapse and propagate fewer shocks (Elmqvist et al., 2003; Hidalgo et al., 2018).

Third, network metrics such as centrality, modularity, and clustering coefficients provide insight into the architecture of interdependencies across supply chains, financial systems, and essential service networks. These measures help identify critical nodes whose failure would generate cascading disruptions (Barabási, 2016; Leca & Balland, 2020).

Fourth, relational indicators capture the density and quality of cooperative interactions—social capital, trust, reciprocity, and patterns of mutual aid that strengthen collective resilience (Putnam, 2007; Aldrich, 2012).

 doi:10.20944/preprints202512.0349.v1

Finally, adaptive governance indexes are necessary to evaluate institutional capacities for learning, experimentation, and polycentric coordination. Such metrics assess whether governance systems can adjust to uncertainty and leverage distributed intelligence in decision-making (Chaffin et al., 2014; Duit, 2016).

These indicators are not designed to replace GDP but rather to complement national accounts by surfacing system-level properties that conventional economic aggregates cannot observe (Arthur, 2021; Balland et al., 2022; OECD, 2024).

2.5. Why GDP Fails in Complex Systems—And What a Complexity-Aware Alternative Looks Like

GDP's failure in complex systems stems from its ontological assumption of additivity and commensurability. Where system behavior arises from networked interdependencies, scalar aggregates lose crucial information. Complexity-aware alternatives do not presume that a single headline number can represent multi-scale system health. Instead, they propose dashboard approaches combining ecological stock accounts, well-being metrics, network analyses, and resilience indicators (OECD, 2024; UNDP HDR, 2024). Such dashboards are designed to be context-sensitive: indicators will differ for a rapidly urbanizing African megacity, a small island developing state, or an EU welfare state, reflecting differing trade-offs and policy priorities.

A complexity perspective also foregrounds early-warning indicators and leading measures (e.g., biodiversity trends, soil fertility trajectories, community cohesion metrics) that provide actionable foresight rather than retrospective aggregates. By shifting the policy focus from maximizing a single scalar to maintaining system health across multiple dimensions, complexity-informed measurement can align incentives with long-term resilience and intergenerational justice.

3. Relational Theories of Well-Being (Sen, Nussbaum, Appadurai)

3.1. The Capabilities Approach: Well-Being as Freedom, Agency, and Becoming

The capabilities approach—pioneered by Amartya Sen and expanded by Martha Nussbaum—provides one of the most influential frameworks for assessing human well-being beyond GDP. Sen (1999, 2009) argues that well-being should be evaluated not through income, consumption, or aggregate output, but through the *real freedoms* people have to become and to do what they value. In Sen's formulation, development is an expansion of agency, dignity, substantive freedoms, and participatory capability, dimensions that conventional production-centred metrics systematically neglect (Sen, 2009).

Sen's model is relational in two fundamental ways:

1. Interpersonal relationality – an individual's capabilities depend on social arrangements, community norms, and institutional design.
2. Ecological relationality – capabilities are inseparable from environmental stability, health, climate conditions, and resource availability, all of which have become central in contemporary post-growth debates (Stiglitz et al., 2023).

Crucially, Sen distances himself from utilitarian happiness metrics and GDP-based welfare economics by insisting that justice, freedom, and agency are irreducible features of human flourishing.

In African urban contexts—such as Kinshasa, Nairobi, and Addis Ababa—capabilities are shaped by infrastructural inclusion/exclusion, informal economies, community solidarities, spiritual and moral worldviews, collective aspirations, and exposure to ecological shocks (UNDP, 2024). Capabilities, therefore, are not purely individual nor strictly economic; they are socio-spiritually embedded freedoms.

 doi:10.20944/preprints202512.0349.v1

3.2. Nussbaum's Central Capabilities: A Plural and Normative Architecture of Flourishing

While Sen avoids specifying a fixed set of capabilities, Nussbaum (2011, 2020) proposes a universalist and normative list of ten central human capabilities—including bodily health, bodily integrity, practical reason, affiliation, imagination, play, and control over one's political and material environment.

Nussbaum's recent work emphasises:

- affiliation as a core relational dimension of well-being;
- imagination and emotion as foundations of meaning;
- political and material agency as prerequisites for dignity;
- care, empathy, and compassion as relational capabilities essential for collective flourishing (Nussbaum, 2020).

Her framework resonates strongly with African communitarian ontologies, particularly Ubuntu, which conceives personhood as relational ("I am because we are"). Ubuntu foregrounds reciprocity, mutual recognition, communal responsibility, and shared dignity (Mbigi, 2019; Ramose, 2022). When brought into dialogue, Nussbaum's universality and Ubuntu's contextual relationality provide a powerful theoretical basis for post-GDP well-being assessments grounded in ethics, culture, and social cohesion.

3.3. Appadurai: Aspiration, Imagination, and the Cultural Capacity to Navigate the Future

Arjun (2007, 2013) contributes a distinct relational perspective by conceptualising development as a *cultural capacity to aspire*. Aspirations, for Appadurai, are not individual psychological preferences but *collectively produced navigational capacities* that enable communities to orient themselves toward possible futures.

Three dimensions are central:

(1) Aspiration as a Social and Relational Good

Aspirations are generated within social networks, community norms, and shared narratives. Culture—through ritual, storytelling, education, and spiritual practices—shapes aspirational horizons (Appadurai, 2013).

(2) Imagination as Infrastructure

Appadurai (2013) conceptualizes imagination as a social technology structured by institutions, media, and communal practices. In many African contexts, churches, revival movements, prophetic ministries, and prayer groups serve as infrastructures of imagination, expanding the horizon of possibility for marginalized populations (Meyer & de Witte, 2023).

(3) Navigating Uncertainty

Aspirational capacity enables individuals and communities to navigate complex and uncertain socioeconomic landscapes—aligning closely with insights from complexity economics and post-growth political economy (Appadurai, 2013).

Thus, aspiration and imagination are value-generating capacities that shape opportunity structures, institutional design, and development pathways.

3.4. Implications for the Concept of Value

Across Sen, Nussbaum, and Appadurai, a new paradigm of value emerges—radically distinct from GDP logic:

- Value is relational: produced through social bonds, moral economies, and community-based capacities.
- Value is aspirational: rooted in collective imaginaries, meaning-making, and the capacity to envision dignified futures.

 doi:10.20944/preprints202512.0349.v1

- Value is co-produced: emerging through interactions among individuals, institutions, infrastructures, and ecologies.
- Value is spiritual as well as material: many African societies embed well-being within spiritual, moral, and cosmological orders.

This conceptual synthesis grounds the transition toward civilizational metrics and post-GDP political economy.

4. Post-Growth Political Economy and Civilizational Metrics

4.1. The Global "Beyond GDP" Debates (2020–2025)

Between 2020 and 2025, global debates on "Beyond GDP" accelerated.
The European Parliament's Beyond Growth Conference (2023) convened heads of state, leading economists, and civil society to discuss replacing GDP with multidimensional frameworks centred on ecological stability, equity, and well-being (European Parliament, 2023).

Similarly, the OECD Well-Being Framework (2022–2024) integrates measures of subjective well-being, environmental quality, trust, governance, housing, social capital, community cohesion, and resilience (OECD, 2024).

The UNDP Human Development Reports (2023, 2024) argue that the world has entered an era of "accelerated uncertainty" in which climate shocks, digital precarity, conflict, and political polarization demand new civilizational metrics grounded in well-being, planetary boundaries, and institutional robustness (UNDP, 2024).

A shared consensus is emerging: GDP is structurally incapable of assessing progress in a complex, ecologically unstable, and socially interconnected world (Moleka, 2026).

4.2. Post-Growth Frameworks and Economic Reconceptualization

Doughnut Economics

Raworth's (2023) doughnut model defines a "safe and just space" for humanity formed by:

- ecological ceilings (planetary boundaries),
- social foundations (human rights, needs, and capabilities).

The doughnut synthesizes ecological economics, complexity science, and capabilities theory into a coherent metric for civilizational flourishing.

Degrowth Scholarship

Degrowth scholarship argues that affluent economies must reduce material throughput while improving human well-being through:

- shorter workweeks,
- universal public services,
- renewable energy transitions,
- decommodification of basic goods,
- strengthened commons and cooperative institutions.

Hickel (2020, 2023) highlights global equity, ecological justice, and redistribution as essential to post-growth transitions.

Well-Being Economy Governments (WEGo)

Countries including New Zealand, Scotland, Iceland, Finland, and Canada have adopted well-being budget frameworks that prioritize:

- mental health,
- environmental resilience,
- cultural vitality,
- intergenerational justice (Hayden, 2024; Mesiäislehto et al., 2025).

 doi:10.20944/preprints202512.0349.v1

Rather than simple measurement tools, these frameworks operate as **transition architectures**, restructuring institutions, markets, and governance around multidimensional well-being.

4.3. Civilizational Metrics: Reimagining Value at Planetary Scale

Civilizational metrics integrate insights from:

- planetary boundaries (Rockström et al., 2023),
- social foundation indicators (Raworth, 2023),
- institutional resilience and complexity governance (Chandler, 2024),
- relational, spiritual, and cultural paradigms of well-being (Mbigi, 2019; Meyer & de Witte, 2023).

Three pillars define this framework:

(1) Planetary Stability

Boundaries on climate, biodiversity, nitrogen cycles, soil fertility, and freshwater stability define the ecological conditions necessary for human and non-human flourishing.

(2) Social Capabilities and Human Dignity

Encompassing capabilities, rights, cultural belonging, equity, empowerment, and communal solidarity.

(3) Institutional Resilience and Democratic Depth

Including governance quality, transparency, social trust, conflict mediation, digital safety, and epistemic diversity.

Civilizational metrics therefore reveal the complexity of coupled human–ecological systems, embedding survival, justice, imagination, and planetary care into the very architecture of value.

5. Rethinking Value: Ecological Boundaries and Social Capabilities

5.1. Ecological Regeneration as Value

In post-GDP political economy, the notion of value can no longer be reduced to the expansion of market production or increases in monetary throughput; rather, it must be understood through the capacity of socio-ecological systems to regenerate, sustain, and renew the biophysical foundations upon which all economic activity depends. Ecological regeneration—manifested through soil rehabilitation, biodiversity restoration, carbon sequestration, and the stabilization of hydrological cycles—has increasingly been recognized as a primary form of value creation in the twenty-first century (Dasgupta, 2021; UN Environment Programme, 2023). Yet conventional metrics such as GDP treat extractive and degradative activities as positive economic contributions, while regenerative processes—precisely those that secure the material basis of life—often remain invisible because they lack market prices. This asymmetry reflects a deeper epistemic failure in national accounting systems, which continue to reward throughput rather than ecological balance. Ecological economists therefore argue that regenerative capacities should be treated as foundational natural capital, without which all other economic processes are rendered impossible (Costanza et al., 2023). Because regeneration is cumulative, relational, and temporally extended, it is misaligned with the rapid turnover of financialized capitalism, whose short-term cycles often incentivize ecological depletion.

However, accumulated evidence demonstrates that nature-based solutions (NBS)—such as mangrove restoration, watershed reforestation, urban green infrastructure, and wetland rehabilitation—generate substantial long-term economic, climatic, and social dividends that far exceed the narrow transactional flows captured by GDP (Brears, 2024; Seddon et al., 2021). In many regions of the Global South—and particularly across Africa—ecological regeneration is not an ancillary environmental concern but a practical pathway to livelihoods, food sovereignty, and climate resilience. Regenerative agriculture in Kenya, community forestry initiatives in Cameroon, and large-scale watershed restoration in Ethiopia illustrate how ecological renewal directly enhances adaptive capacity, strengthens local economies, and improves social resilience (African Development Bank,

 doi:10.20944/preprints202512.0349.v1

2023). These cases reveal that regeneration is not the absence of production but a higher form of production oriented toward systemic sustainability, intergenerational equity, and long-term planetary stability.

5.2. Social Capabilities as Value

Building on Sen's (1999) capability approach and Nussbaum's (2011) list of central human capabilities, contemporary relational sociology conceptualizes social capabilities—education, health, agency, participation, social cohesion, and relational networks—not merely as determinants of wellbeing but as intrinsic value-producing capacities that shape the resilience and adaptive efficiency of societies. These capabilities play a decisive role in determining productivity, innovation, collective problem-solving, and social stability, particularly under conditions of uncertainty and socio-ecological stress (Alkire & Santos, 2022). Recent empirical studies indicate that societies with high relational capital—characterized by trust, cooperation, cultural vitality, and equitable institutions—demonstrate superior resilience to crises ranging from pandemics to extreme climatic events (OECD, 2023). Social capabilities therefore function not only as moral goods but as systemic assets that enable communities to co-design nature-based solutions, coordinate resource management, and maintain collective functioning during disruptions.

In African contexts, social capabilities are deeply embedded in communal ontologies expressed through kinship systems, Ubuntu ethics, customary authority, and cooperative labour arrangements. These relational infrastructures, while routinely excluded from GDP calculations, shape the adaptive capacity of populations to navigate ecological degradation, economic volatility, and social transformation. As a result, value is not the outcome of individual accumulation but the expansion of collective capabilities—an insight increasingly recognized within cutting-edge post-growth measurement systems such as the Well-Being Economy Indicators (2024), the revised Multidimensional Poverty Index (2022–2024), and the UNDP Planetary Pressures-Adjusted HDI (2023).

5.3. Systemic Resilience as Value

The twenty-first century is marked by pervasive polycrisis—climate instability, cascading ecological risks, geopolitical fragmentation, pandemics, and supply-chain vulnerabilities—that disrupt linear assumptions about progress and growth. Under these conditions, value must be reconceptualized as systemic resilience: the capacity of societies to absorb shocks, adapt, reorganize, and continue functioning without crossing socio-ecological thresholds (Folke et al., 2021). A resilience-centred conception of value emphasizes diversity, redundancy, modularity, adaptability, and learning capacity as constitutive elements of societal strength. GDP, premised on linear accumulation and efficiency maximization, offers no meaningful insight into these resilience attributes.

In practice, resilient systems exhibit multiple economic forms (formal, informal, subsistence, digital, hybrid), flexible governance structures, redundant infrastructures that prevent cascading failures, and knowledge systems that integrate scientific, indigenous, and community-based expertise. African cities such as Lagos, Kinshasa, and Nairobi exemplify these dynamics: their informal infrastructures—transport networks, local trading systems, rotating savings associations, and digital platforms—provide functional redundancy and adaptive flexibility that allow millions to navigate systemic volatility (Pieterse & Parnell, 2022). These hybrid socio-technical systems confirm that resilience arises not from centralized efficiency but from decentralized diversity. As Moleka (2025a, 2025b) argues, African urban complexity provides a powerful illustration of how informal economies constitute living resilience architectures that sustain urban life when formal infrastructures falter.

 doi:10.20944/preprints202512.0349.v1

5.4. Integrative Multidimensional Frameworks

Led by advances in ecological economics, post-growth political economy, and wellbeing science, scholars increasingly advocate for integrative measurement frameworks that embed human wellbeing within planetary boundaries and social capabilities. Emerging models such as the Doughnut Economics 2.0 framework (Raworth, 2023), the Planetary Boundaries + HDI Matrix (UNDP, 2023), the Well-Being Economy Framework (2024), the World Bank's Nature-Positive Economic Accounts (2023), and the African Regenerative Index (Mabunda et al., 2024) represent substantial progress beyond GDP. These frameworks assess value not through market transactions but through multidimensional criteria that include ecological integrity, relational cohesion, cultural vitality, gender equity, and community resilience. By explicitly recognising the interdependence between biospheric limits and social capabilities, these models offer a comprehensive foundation for post-GDP governance and align measurement with the material and relational conditions necessary for sustaining life in an era of planetary crisis.

6. Policy Implications for Africa and the Global South

6.1. Africa as a Post-GDP Laboratory

Africa's demographic dynamism, urban complexity, high informality, and pluriversal knowledge systems position the continent as one of the world's most important laboratories for post-GDP political economy. Conventional national accounting undervalues informal economies—which represent 70–90% of total employment across many African countries (ILO, 2024)—and fails to capture ecological vulnerability, youth aspirations, cultural wealth, and social solidarity.

In addition, African economies are highly exposed to climate risks, including droughts, floods, biodiversity loss, and land degradation. Integrating nature-based solutions (NBS) into national accounting—for example, wetlands restoration in Uganda, mangrove rehabilitation in Senegal, and community-led agroforestry systems in Zambia (Chomba et al., 2023)—would fundamentally reshape development trajectories by recognizing regenerative ecological assets as sources of long-term value.

Importantly, many African economies are not locked into heavy legacy industrial infrastructures, allowing greater flexibility for leapfrogging toward regenerative, plural, capability-based, and post-GDP metrics (African Union, 2023). This opens space for experimentation with well-being accounting, ecological indicators, and community-based measures of value.

6.2. Plural Value Systems: Communalism, Ubuntu, and Relational Ontologies

African philosophical traditions provide conceptual foundations that strongly complement post-GDP thinking. Ubuntu—emphasizing relational personhood, mutual flourishing, reciprocity, and restorative ethics—offers a powerful framework for recognizing non-market forms of value such as caregiving, community governance, social cohesion, and ecological stewardship (Ramose, 2020; Metz, 2022).

Furthermore, many African cosmologies link human well-being to ancestral land, sacred ecologies, intergenerational balance, and spiritual harmony, aligning with global movements toward relational, regenerative, and pluriversal development models. These ontologies challenge GDP's implicit cultural bias toward individualistic accumulation and linear production, instead foregrounding ecological-spiritual valuation systems that are increasingly recognized in global sustainability scholarship (Escobar, 2020; Bang et al., 2022).

Incorporating such plural ontologies would enrich the global post-GDP agenda by embedding ethics, relationality, and cosmological depth into development frameworks.

 doi:10.20944/preprints202512.0349.v1

6.3. Frugal Innovation and Resilience

Frugal innovation—resource-efficient, affordable, community-embedded solutions—is a major driver of value creation across Africa. Examples include:

- low-cost solar microgrids in Tanzania enabling off-grid energy access (Moner-Girona et al., 2021);
- waste-to-energy systems in Kigali, designed for circular urban metabolism (Niyibizi & Ujeneza, 2022);
- mobile-money ecosystems such as M-Pesa, supporting climate-resilient finance and everyday economic inclusion (Suri & Jack, 2016);
- regenerative agriculture and farmer-managed natural regeneration in West Africa (Reij & Winterbottom, 2015; Moleka, 2024).

Frugal innovation enhances resilience by optimizing local resources, reducing ecological pressures, strengthening social capability systems, and fostering community adaptability. As such, it should be integrated as a core dimension of post-GDP value creation in African and Global South contexts.

6.4. New Indicators for African Cities

African cities require measurement frameworks capable of capturing their hybrid, fast-evolving, and often informal urban systems. Key categories include:

- Hybrid productivity measures integrating formal, informal, and digital economic activity;
- Ecological integrity indicators such as biodiversity levels, tree cover, soil health, and water-cycle stability;
- Community capability metrics, including trust networks, citizen participation, and governance legitimacy;
- Resilience indicators for mobility redundancy, disaster preparedness, food security, and flood risk management.

Several African cities—including Cape Town, Nairobi, Accra, and Kigali—are experimenting with well-being dashboards, urban resilience indices, and ecological accounting frameworks that move beyond GDP-centric planning (Cities Alliance, 2024; UN-Habitat, 2023).

These indicators help policymakers assess urban systems as complex, adaptive, multisectoral ecosystems, rather than merely engines of GDP growth.

6.5. Lessons for Global Transitions

Africa's experience with hybridity, informality, social resilience, and ecological precarity offers meaningful lessons for global post-GDP transitions:

- Relational and communal value systems (e.g., Ubuntu) strengthen long-term climate adaptation and social cohesion.
- Plural knowledge systems—indigenous, local, scientific—enhance NBS design and governance.
- Ecological regeneration should be integrated directly into national accounting systems.
- Well-being, capabilities, and relational indicators outperform production metrics for guiding sustainable development pathways.

In this sense, Africa's plural ontologies, adaptive innovations, and ecological realities provide critical insights for global debates seeking to transform economic systems for a post-GDP, post-carbon, and post-extractive world.

Conclusions

GDP is no longer adequate for a world shaped by ecological stress, complexity, digital ecosystems, and relational forms of wellbeing. Sections 5–7 show that value must be reframed around

 doi:10.20944/preprints202512.0349.v1

ecological regeneration, social capabilities, and systemic resilience. African experiences, epistemologies, and innovations offer vital contributions to this shift.

A post-GDP framework is not simply a technical reform but a civilizational transition—from extraction to regeneration, from individual accumulation to collective capability, from linear growth to complex adaptive resilience. For the Global South, this shift enables development pathways that are endogenous, sustainable, culturally grounded, and ecologically just.

Future research should deepen the integration of nature-based solutions into economic metrics, explore relational and capability-driven models for urban planning, and evaluate the role of African spiritual ecologies in redefining value. Such work will shape the emerging political economy of wellbeing that is urgently needed for planetary stability and human flourishing.

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