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THEORETICAL UNDERPINNINGS OF LIBERIA'S POST-CONFLICT RECOVERY: PERTINENT LESSONS FOR DEVELOPING COUNTRIES[3]

Post-conflict recovery in underdeveloped and developing countries is always a challenge for political leadership. Liberia has been the victim of 14 years of civil war, due to which GDP experienced a downfall by over 90% making the economic growth process halted. This paper traces the extent of Liberia's collapse and examines the patterns of post-conflict recovery as an application complexity theory and a model which can be followed by other conflict confronting developing countries. The Paper explores challenges faced by Liberia in strengthening rapid, inclusive, and sustained economic growth and how these challenges were converted into opportunities through dynamic leadership and institutional process that had roots in complexity theory. It examines the policy framework and institutional reforms which set the pace for sustainable economic growth in Liberia. Because of visionary steps by leadership, the economic growth, which was very low before 1999, showed positive improvement after the election in 2005. It was concluded that from 2005 to 2014, the per capita GDP growth rate had been approximately 63% which indicated the remarkable performance of the Liberian Government. Paper presents theoretical perspective to understand challenges of socioeconomic growth and mechanism for its revival in poor conflict-hit underdeveloped and developing countries.

Keywords: leadership; post-conflict; policy; challenges; political; institutional reforms; complexity theory
JEL: O21; O43; O55

1. Introduction

Liberia was decimated by 25 years of economic mishandling and 14 years of civil war. The devastation resulted in the displacement of over 500,000 individuals, who fled their homes as either internally displaced persons (IDPs) or refugees in neighbouring countries (Gul, 2013). Families were shattered and communities were uprooted. The Social, political,

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economic, and governance systems of the country were collapsed. Commercial and productive activities were destroyed due to terrible law and order situation. GDP fell by over 90% in less than two decades which has been termed as one of the largest economic collapses in the world since World War II (Radelet, 2008). However, after the election in 2005 and the restoration of the democratic process, Liberia's devastation was relatively over (Gul, Ghazali, 2020). Using constituents of complexity theory, the newly elected leadership introduced a broad set of people-centric policies to foster peace, launch reconstruction and development, and build strong systems for governance. One of the most critical issues for Liberia's recovery was to establish the foundation for rapid, inclusive, and sustainable economic growth. The post-conflict socioeconomic recovery was a challenge for political leadership that could not be handled with conventional leadership approaches. It demanded a new innovative approach based on complexity leadership and socio-economic theory. This paper examines Liberia's journey towards socioeconomic growth, its patterns, key issues, and the most important policy steps towards post-conflict recovery. The complexity leadership approach that was adopted by the Liberian government has many lessons for underdeveloped and developing countries suffering from conflicts and desirous for early recovery.

2. Survey and Appraisal of Literature on Post Conflict Recovery

Liberia is Africa's oldest republic in West Africa; it became better known in the 1990s for its long-running, ruinous civil war. Liberia' landscape is characterised by mostly flat to rolling coastal plains that contain mangroves and swamps. The equatorial climate is hot year-round with heavy rainfall from May to October, with a short interlude in July to August. As indicated by the World Development Indicators 2015, the population of Liberia is 5.503 million as per statistics of 2015 and its GDP per capita is 458.87 (World Development Indicators, 2015). Many researchers have investigated conflicts and post-conflict recoveries in different regions. A review of few prominent studies has been elucidated below.

2.1. Growth process in African countries

Basu et al. have carried out extensive work on the growth process in Sub Saharan Africa in 2001 and highlighted that owing to effective leadership and institutional measures, many countries of sub-Saharan Africa have shown signs of growth amid challenges. Many developing countries have recovered from their conflicts. There are many lessons that can be learnt by the rest of the world from the successful leadership and institutional strategies of underdeveloped and developing African countries (Basu et al., 2001). Binswanger et al. have investigated the structural transformation of African societies in 2010. It was concluded that the revival and modernisation of agriculture played an important role in the structural transformation of Liberia and other African societies (Binswanger et al., 2010). In 2000, Burnside and Dollar have elucidated a strategy for immediate post-conflict recovery in poor countries. It was indicated in the study that financial aid and initiation of incentives regime for work are effective post-conflict strategies to reduce poverty in conflict-hit countries (Burnside, Dollar, 2000).

Cuesta and Abras have elucidated the conflict-induced socio-economic devastation of Liberia in 2013. He explained that there were less than 50 Liberian physicians to cover the nation's public health needs, equal to one for every 70,000 Liberians. About 70% of school buildings were partially or wholly destroyed. A whole generation of Liberians has spent more time at war than at school. It was indicated in the study that the situation after 2005's election had a striking contrast with the previous decade as equal education opportunities to Liberian children were provided after the election of 2005 that had converted the mindset of society from conflict to development (Cuesta, Abras, 2013). Fosu, in his extensive work, indicated in 1992 that the main reason for low economic growth in Sub Saharan Africa was political instability and weak institutions. Economic prosperity in these countries can be achieved by restoration of a stable democratic process and by strengthening the institutions (Fosu, 1992). In 2012, Enuka investigated the effects of conflicts and arms proliferation on socio-economic growth. It was highlighted in the study that arms proliferation in poor conflict-hit countries has increased and that has damaged the socioeconomic life of the population in these countries. For long-lasting sustainable socioeconomic growth, conflicts in poor countries need to be resolved and arms proliferation is required to be strictly controlled (Enuka, 2012).

Reviewing the World Bank's survey of the African crisis referred to as Berg's Report, Gerhart elucidated in 1997 that for the acceleration of sustainable long term development in Sub Saharan Africa, external factors like trade and aid policies cannot be ignored (Gerhart, 1997). Ghura investigated the effects of macroeconomic policies and institutional measures on economic growth in Sub Saharan Africa in 1995. It was concluded in the study that effective institutional actions were essentially required to have an accelerated economic growth rate in Sub Saharan African countries (Ghura, 1995). In another study of 1998, Ghura also indicated that revenue collected through taxes in most of the countries of sub-Saharan Africa gets wasted due to widespread corruption (Ghura, 1998). Particularly indicating Liberia's financial crisis and failure of monetary policies, Gonpu has indicated in 2014 that the banking and monetary crisis in Liberia was from 1986 to 1999 was due to bad governance of the Liberian government that rendered the National Bank of Liberia ineffective (Gonpu, 2014).

Gul conducted extensive investigations on socioeconomic growth in Liberia in 2013. He explained that Liberia's GDP began to decline after 1980 and collapsed after the beginning of the war in 1989. GDP dropped by 90% between 1987 and 1995. The violence reached extreme levels in 2002 and 2003 until the UN peacekeepers arrived in 2003. As the Liberian economy imploded, poverty increased sharply, and more than 75% of Liberians lived below the poverty line of $1 per day. Unemployment was high as returning refugees and internally displaced persons were struggling to find work. Refugees returning to their farms faced a lack of seeds, fertilisers and modern agriculture tools. Schools, hospitals, and clinics were badly damaged, and most government buildings were left in shambles. The war left basic infrastructure in ruins. There was no electricity or piped water supply anywhere in the country for 15 years after 1991. Many roads became impassable, which weakened economic activity and undermined the delivery of basic health and education services. Exports ceased entirely, dropping to about $10 million in 2004. Government revenue fell to less than US$85 million a year between 2000 and 2005, translating into public spending of only about US$25 per person per year; one of the lowest levels in the world. Agricultural production dropped as people fled their farms. Production of iron ore, timber, and mining ceased completely.

Electricity and water supply fell by 85%. Transportation, communication, trade and construction all fell by approximately 70%. He further explained that fast socio-economic growth in Liberia after 2005 was due to the restoration of democracy and strong institutional measures (Gul, 2013).

In 2006, Hausmann et al. indicated that an increase in exports and ensuring export diversification could lead to fast economic growth and this can be one of the effective tools to accelerate growth and development in poor countries (Hausmann et al., 2006). Jones indicated in 2000 that foreign aid was an essential tool to foster economic growth in developing and underdeveloped countries of Africa as they lacked the indigenous capability to restore their economic prosperity. Statistical data has indicated that increasing aid has increased economic growth in poor African countries (Jones, 2000).

McIntire carried out research on agriculture in African countries in 2014. It was concluded in the study that for sustainable economic growth in African countries, agriculture needs to be modernised and transformed into a technologically advanced production process (McIntire, 2014). Particularly indicating woman empowerment issues in Liberia, Moran elucidated in 1989 that empowerment of women was an essential requirement for socioeconomic and socio-cultural growth in Liberia and other developing and underdeveloped African economies. Without woman empowerment, sustainable long term growth is difficult to be achieved (Moran, 1989). Rodrik explained in 2004 that for sustainable development, industrial policies are required to be reconfigured and reoriented so as to make it modernised and ensure efficiency in the production process. It was highlighted that poor countries need to be assisted in policy formulation to achieve the goal of sustainable development (Rodrik, 2004). Sonobe and Otsuka, in their research on industrial policies, elucidated in 2010 that in developing countries cluster based industrial development should be promoted as this could be an effective strategy for economic development in developing countries (Sonobe & Otsuka, 2010).

2.2. Relationship between complexity theory and socioeconomic recovery

It may be known to a small number of social researchers that post-conflict socioeconomic recovery of Liberia is an excellent case study of complexity leadership and economics theory. It is not surprising to know that even the Liberian government did not know that the leadership approach they are following for post-conflict recovery had roots in complexity theory. Few researchers have investigated the relationship between complexity theory and socioeconomic conditions in different regions of the world.

In 1999, Arthur carried out extensive research on complexity theory and economy. In fact, he came out with the idea of complexity economics. It was established in the study that complexity economics is based on networks of heterogeneous agents and these networks are influenced by many surrounding systems. Thus, the economy remains in consistent dynamic conditions instead of being in equilibrium at a single point (Arthur, 1999). The same year, Fogel worked on inductive reasoning and bounded rationality in the context of social networks. It was indicated in the study that agents in networks are bounded rationale and they do not have complete information. They contribute based on changing dynamic situations

(Fogel, 1999). Again, the same year Goldstein brought out the fact that socioeconomic emergence is the logical result of the interaction of agents in networks (Goldstein, 1999).

In 2001, Holling carried out research on the influence of ecological, social and environmental systems on economic growth in complexity economics scenario. He elucidated that in complexity economics, the economy is closely netted to other surrounding systems and it works as an open system (Holling, 2001). The same year, Mikulecky carried out analytical research on the emergence of complexity theory. The study analysed emergence as modern science that has relevance to all fields of social life (Mikulecky, 2001).

In 2013, Moersch carried out research on complexity economics as a different framework for economic thought. It was highlighted in the study that the framework of complexity economics is different than conventional economics. Complexity economics framework is an alternative paradigm within the subject of economics, based on complex theory and non-linear models. In this framework, the economy operates as an open system composed of heterogeneous agents, with bounded rationality, that interacts in networks. The economy remains in non-equilibrium state and it remains in constant change driven by internal dynamics (Moersch, 2013).

3. Complexity Theory, Leadership and Socioeconomics Framework

The deep economic crisis in Liberia and desired post-war economic recovery by the newly elected government called for the application of unconventional non-linear complexity economics framework. There were two reasons for adopting this strategy. One, post-war economic recovery was not a normal case. There were many external systems that were influencing economic growth and the influence of those systems had to be considered for long term sustainability and growth. This aspect is indicated in Figure 1 that shows a dynamic open economy model followed for post-conflict economic recovery by the government of Liberia. As can be seen in the figure, the economy was made to function as an open system interacting with other systems such as social, cultural, financial, environmental, technological and ecological. The influence of security situation and global linkages in post-conflict democratic era were also considered. By adopting such a framework, the economy was allowed to take in resources from other systems such as social capital from the social system and ecological capital from the ecological system so as to generate an output of higher value with entropic residuals.

Second, in the case of post-war economic recovery, synthesis was considered more pertinent than analysis as economic institutions were destroyed and it had to be built afresh. Therefore, an open system composed of heterogeneous agents with bounded rationality was more pertinent than the top-down, tightly closed economic system. This approach generated crisscrossed networks of interactions between agents of different systems. These networks were a replica of institutions in conventional economics but more diverse and stronger. This arrangement is shown in Figure 2.

One peculiar characteristic of this approach was that economy was not considered in equilibrium; rather, it was considered in a dynamic state of disequilibrium, constantly changing, evolving and moving towards multiple points of equilibrium between different systems represented by networks of heterogeneous agents.

Figure 1

Open economy model showing economy interacting with other systems

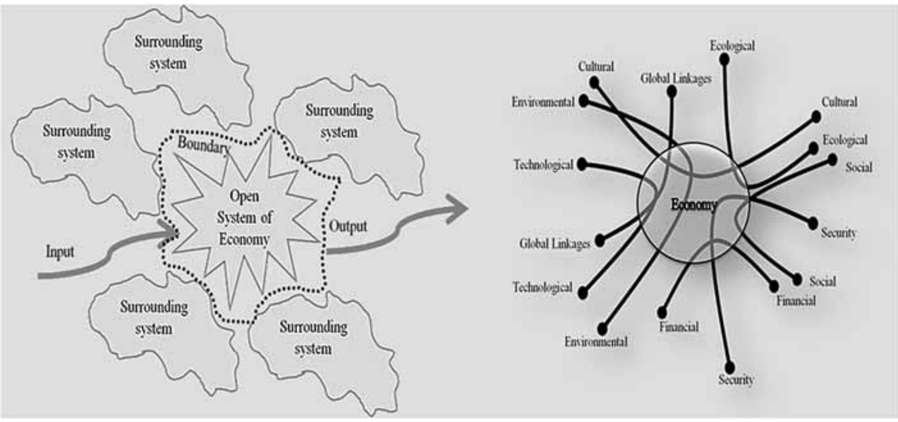

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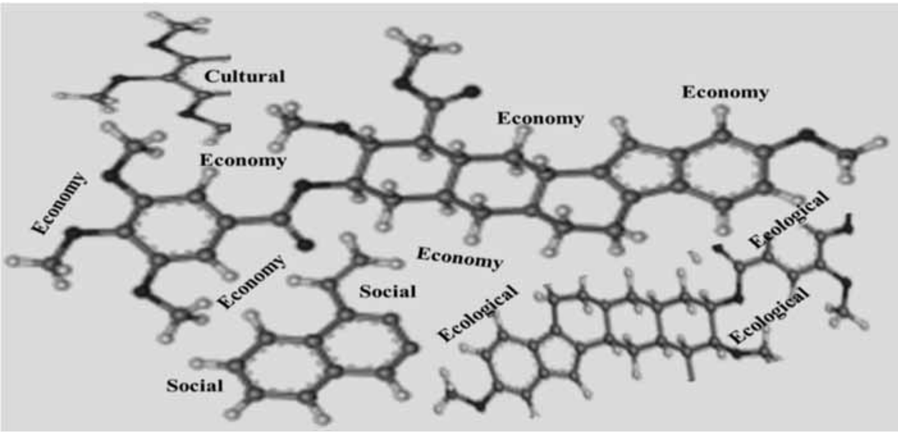
Figure 2

A glimpse of complexity economy ic system composed of heterogeneous agents of different systems interacting through networks



Source: author's own work.

Economic system was governed by algorithms that were instructions to govern the process of interaction between agents of different systems and conversion of input into output after flowing through networks. These instructions generated cohesion between networks of heterogeneous agents with heterogeneous expectations and created a realistic economic structure that guaranteed exponential economic growth with long term sustainability. Agents were embedded within many cross-connected networks such as social, cultural, technological etc. These networks were so netted that success or failure was determined by many different interacting socioeconomic variables across different networks. Sustainable socio-economic growth was a natural emergence of such a system.

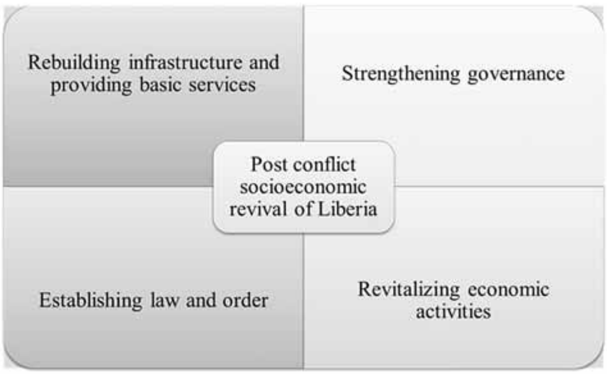
It is worth mentioning here that the new government in 2005 did not deliberately adopt complexity economics and leadership model. The government developed a people's centric strategy to revive socio-economic growth. Later, when strategy and the consequent system was studied in depth, it revealed that the government unintentionally followed a complexity framework which worked successfully.

4. Conceptual Contours of Four Pillars Model Through Lens of Complexity

The democratic political process was restored in 2005 when national elections were held under the umbrella of the United Nations Organization. These elections provided direction to the people of Liberia. The new government faced the daunting task of socioeconomic rebuilding Liberia from the ashes of war. New leadership had to handle a complex social system in a complex environment. The national static mindset was to be converted into a dynamic progressive approach that constantly brought forth new ideas and resulted in the emergence of socioeconomic growth and, in fact, a new nation. Static and conventional mindset was converted into a progressive behaviour fundamentally defined by change. This was a typical complexity leadership scenario. The traditional leadership approach was not valid as a bureaucratic framework with top-down rigid organisational alignment was of no use in such a scenario. Many tasks pertaining to different systems were to be handled simultaneously, which was not possible through a traditional control mechanism. Therefore, a focused and coherent innovative approach was required to tackle essential core issues of socioeconomic rebuilding. To handle this challenging task, a simple and straightforward prioritisation was done by the government through the involvement of social stakeholders from different systems through networks of interactive heterogeneous agents. This logically resulted in the orchestration of an all-encompassing strategy organised around a framework with four basic pillars, as shown in Figure 3.

Figure 3

Four pillar model for post-conflict socio-economic revival of Liberia



Source: author's own work.

Achievement of progress in these four pillars was possible through reconfiguration of society on lines of a complex adaptive system comprising networks of interactive, interdependent agents who are willingly bounded by common goals defined by these four pillars for socio-economic revival. Re-orientation and re-configuration were required due to people-centric approach of the newly elected democratic government. In line with the requirement of a complex system, a decentralised control mechanism was adopted for the implementation of all four pillars of socioeconomic restoration. A separate action group (network) was formed for each pillar which consisted of agents from relevant government ministries and departments, key donors and investors, relevant UN agencies, experts, academia, researchers and commoners from all walks of life. Agents were not having complete information about different dimensions emanating from different systems. They were contributing based on changing situations and internal dynamics. Specifically, commoners were not completely rationale in their decision making, neither they were aware of the computation involved in such processes. This was a real scenario with simple agents and a complex situation; the real situation when agents with bounded rationality limited by available information had to make decisions within the time available with the consent of agents from other systems. So, these agents were contributing in real-world scenarios within the multiplicity of different networks, each exerting its own force on the agent's behaviour and conventional linear causality was not valid in such situation.

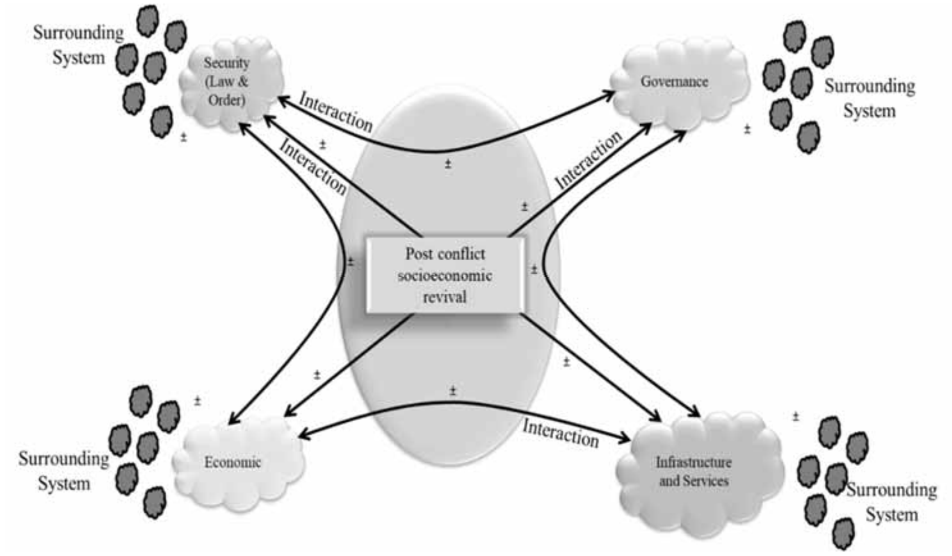
Each group worked with specific mandate and goals to achieve through a participative and interactive process with feedback loops and corrective mechanism. Monitoring of progress of each pillar group was inbuilt in the working mechanism. Agents of networks for different pillars of socioeconomic revival had inter- and intra-pillar interactions which were non-zero sum, unlike the conventional approach. These interactions could add or subtract value to a particular pillar but were not always additive, as is the case in conventional socioeconomics to get equilibrium. These pillars networks evolved their own internal dynamics and structures over time and acted like institutions. The ultimate contribution of each pillar network was the emergence of socioeconomic growth. The functional model is shown in Figure 4. A look at the figure clearly indicates that the network of each pillar was further connected to other systems such as social, environmental, institutional, ecological and technological systems, which were prevailing in Liberia. Resources required for socio-economic development were acquired from the surrounding systems, were processed through internal dynamics of the network and converted into output. Because the system was open and the flow of resources as input and output was interlinked with other systems as well, there were temporal variations in the inputs, outputs and associated processes. Thus, each pillar system was in a state of dynamics.

Each group achieved progress by capitalising on intrinsic and extrinsic values of socioeconomic variables involved in the process. These variables were assessed by social agents under the influence of many different motives and value systems like social capital, cultural capital, and environmental capital. Quantification of socioeconomic variables was done through networks of different interacting variables embedded in the non-zero sum, non-linear interactions between agents.

Cumulative progress of all groups (networks) reflected a great improvement in the shape of socioeconomic emergence within a short period of time. The summarised post-implementation progress of four-pillar groups is indicated on Figure 5.

Figure 4

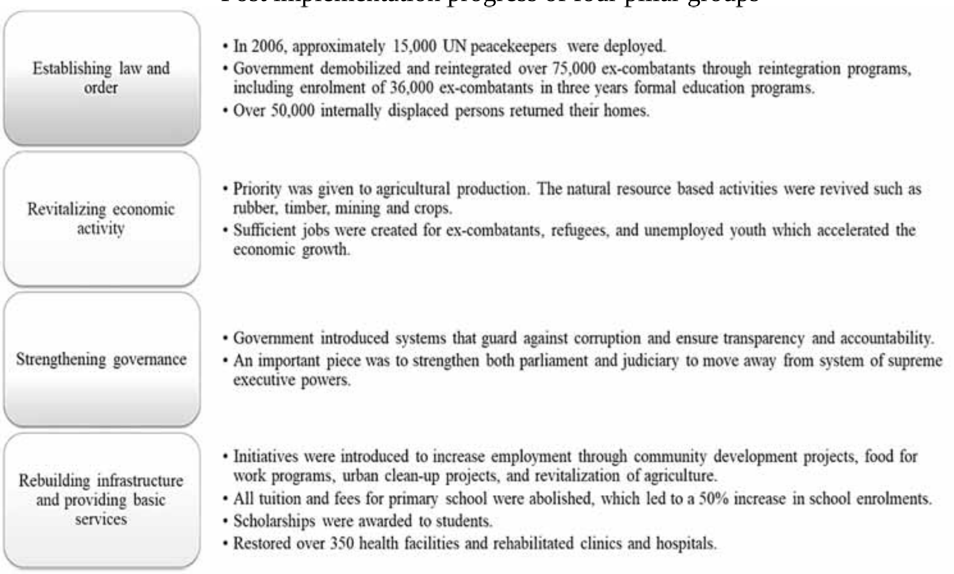
Functional model of pillars' networks for socioeconomic revival of Liberia



Source: author's own work.

Figure 5

Post implementation progress of four pillar groups



Source: author's own work.

5. Patterns of Complexity Leadership Approach and Post Conflict Recovery

The most important issue for Liberia was to achieve rapid, inclusive, and sustainable growth. To achieve this goal complexity leadership approach was adopted instead of the traditional leadership approach. Leadership in Liberia did not attempt to control organisations and institutions forcefully. Instead, it focused to influence organisational, institutional and social behaviour through progressive vision so as to ensure a prosper future. Controls were provided by inbuilt internal mechanisms of competition and coordination between agents in the networks.

Patterns of post-conflict recovery in other African countries were examined and analysed in depth. Experiences of Uganda after 1986, Ethiopia after 1991, Mozambique after 1992, and Rwanda after 1994 provide case studies for comparative analysis. Sierra Leone after 2000 and the Democratic Republic of Congo provide more recent examples of recovery. While the revival pattern of each country is different, some glaring trends were identified, which are enumerated below.

- First, GDP contracted sharply in the final years of the crisis in each country.
- Second, once the conflict ended, growth rebounded relatively quickly within two years in Liberia compared to other African countries. This rebound is mainly due to influential leadership to reap the significant idle capacity at the end of conflict, such as unused farm land, industries and other formal and informal trade activities.
- Third, due to an innovative approach based on the theory of a complex adaptive system, Liberia had a fast journey towards prosperity compared to other African countries. It was able to sustain relatively rapid growth for more than ten years, generally fluctuating between 6 to 9% per year.
- Recovery depends greatly on the leadership approach. Other African countries adopted a traditional leadership approach with a top-down control mechanism in the post-conflict period resulting into the sluggish progress. On the other hand, democratic leadership in Liberia adopted complexity leadership approach that was influential and visionary. It allowed the institutions to works independently through internal dynamics.

Therefore, patterns and timing of recovery differed across various sectors of the economy. Compared to other African countries, the complexity leadership pattern in Liberia did not suppress or aligned the informal network dynamics; rather it was efficiently enabled. Leadership was not only charismatic with strategic vision; it was also people-centric. It fostered conditions to develop institutional and organisational capacity concentrating on a pattern of complexity focusing on people-centric methodology. In essence, leadership created conditions for bottom-up social dynamics, which created positive emergence of sustainable socio-economic growth and, in fact, a new nation. As a result of people-centric policies, services were first to recover in Liberia, with growth jumping to an average of 6% after the end of the conflict, led by construction, hotels, and restaurants. Much of the recovery in services was spurred directly or indirectly by donor funds as foreign investors and donors had confidence in the institutional framework and leadership priorities. Average growth rates in services typically remained at around 5 to 6%. Agricultural growth started somewhat slower, but continued to accelerate, reaching an average of 4%. Manufacturing was the slowest to rebound but generated the fastest growth over the medium term. The manufacturing sector continued at 11% for most of the years.

6. Challenges of Sustainable Socioeconomic Growth and Complexity Framework

Liberia was to capitalise on its peace to build a positive, reinforcing cycle between peace, stability, investment, and growth. In post-conflict scenario, it faced daunting challenges for socio-economic restoration. Restoration of sustainable economic growth was not possible with the traditional leadership approach in a volatile, changing and uncertain environment that was prevailing in Liberia. It required a more innovative leadership approach that could fix issues at hand. New leadership in 2005, adopted a complex leadership and people-centric approach to handle challenges of sustainable socio-economic growth and liberate Liberia from clutches of the war era. For new leadership after the election in 2005, social agents (masses) were the priority and they were fully involved in decision making and monitoring through networks and groups, thus the informal network dynamics were efficiently enabled.

Challenge for Liberia was to rapidly revitalise sustainable socio-economic growth. Liberia could not depend on economic and political structures of the past that led to widespread income disparities, economic and political marginalisation, and deep social cleavages. Liberia's was required to create much more equitable and inclusive economic and political opportunities for Liberians and not for a small elite class. This challenge was met effectively by activating bottom-up dynamics in the socio-political landscape and by letting the complex adaptive system to work on its own. The core of this system was the achievement of macro-level sustainability as emergent properties of micro-level interactions of heterogeneous agents in socioeconomic networks. The result was strong positive socioeconomic emergence with no bias or disparities. This complexity leadership approach created healthy conditions for people to have interactions and self-organise around the core issue of sustainable socioeconomic growth of Liberia.

The network-based complex dynamic system realised that economically more equitable and inclusive growth required a more robust agricultural sector and eventually labours intensive manufactured and service exports that created large numbers of jobs for low skilled workers. People were interconnected within networks of production and consumption. Creating jobs for low skilled workers, especially youth, through new private-sector opportunities or employment programs was the central strand of the whole strategy that emerged from the complex interactions of social agents in socioeconomic networks.

Emergent result from political dialogue in social networks was that Liberia built transparency and accountability into government decision making and created stronger systems of checks and balances across all branches of government by adopting a bottom-up approach in the organisations and government setups. People were allowed to have a say in the policy affairs and suggest policy alignment useful for the whole society. Strict controls on decision making were finished and the social system was allowed to have consented decision mechanism through internal dynamics of networks.

Growth was required to be sustainable. Liberia has a rich resource base, including timber, ore, rubber, and diamonds, fertile lands for agriculture, and ocean and coastal areas. Agriculture was particularly focused given the large number of people involved, its share in the economy, and the importance of food security in ensuring sustained development. As a starting point, these sectors had a potential to create significant numbers of jobs relatively quickly, help rebuild infrastructure, and provide substantial budget revenues. Agriculture was taken as input from the ecological system and processed through the internal dynamics of the economic network. The output was that it created employment for people and productivity gains in agriculture typically provided the foundation for successfully shifting workers to manufacturing and services.

But, Liberia could not rely solely on these activities, since very few developing countries that relied heavily on natural resource exports and extractive industries have achieved sustained economic growth. The most successful developing countries have relied heavily on labour-intensive manufactured exports such as Indonesia, Malaysia, Mauritius, and Thailand as they diversified their exports. Diversification provided a basis for generating sustained growth in productivity, skill levels, wages, and income over time. Manufactured products have much greater potential relative to unprocessed natural resource products for nearly continuous upgrading in product quality as the skills of the workforce improve, allowing for steady growth in productivity and wages over a long time. Labour intensive manufactured exports have been the foundation for long term income growth and poverty reduction in nearly all of the successful developing countries of the last several decades, including China, Indonesia, Thailand, Malaysia, and Korea. Liberia had the potential to create a similar diversified economy and ensure rapid and sustained growth. The diversified economy created a large number of jobs throughout the country for low skilled workers, which turned out to be the most effective economic emergence for Liberia to fight poverty over the long term.

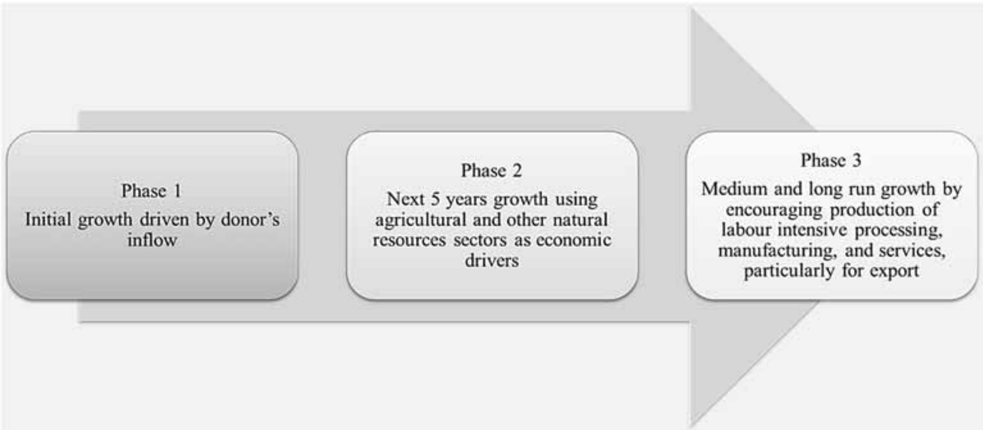
7. Phases of Liberia's Post Conflict Recovery

These complex challenges could not be handled abruptly. A comprehensive roadmap was crafted to tackle them. This road map was rooted in the accumulation of synergies of different components of the economy. These component systems interacted, influenced and interfered with each other. Heterogeneous agents of each constituent network had agreements and disagreements both. These networks had strong internal dynamics. Synergies of these networks formed the basis of the emergence of a strong and diverse socioeconomic structure that accelerated sustainable growth. The Challenge of restoring economic growth in Liberia was handled skilfully in three broad phases, which are shown in Figure 6.

As explained earlier, the complexity economics framework that was followed by the Liberian government envisioned the economy as a complex adaptive system that evolves through people's-centric strategy transforming the economy from within. In such a system, the evolutionary process of diversification and augmentation provided qualitative change within the economy and ensured sustainable growth. Changes in one system led to opportunities in the other. This co-evolution led to the interdependency between industries, agriculture and other sectors as self-organised entities. Functional progress of this complex adaptive system was paved by consistent revision of behaviours, actions, strategies, and products as the heterogeneous agents' accumulated experience. Sustainable economic growth was the natural result of such interdependencies and co-evolution.

Figure 6

Three phases of Liberian economic growth



Source: author's own work.

For the purpose of clarity, steps taken in each phase are required to be elucidated. This elucidation is covered in succeeding lines.

Growth in phase 1 was driven mainly by *donor inflows* and a rebound in urban services. An initial revival in agriculture along with some limited manufacturing and programs aimed at direct employment creation (e.g., small public works projects) was emphasised. In services, construction has been a key driver of growth and is likely to continue to be in the near future as buildings, roads, and other infrastructures are repaired and rebuilt. Within manufacturing, the production of beverages has rebounded quickly. Production of cement increased in 2005. Making cement widely and easily available, was critical to ensuring continued rapid reconstruction in the next several years. Agricultural production was expanded. Rubber production (which accounts for 10% of GDP) showed signs of recovery. Agricultural production remains constrained by poor roads and the uneven availability of key inputs. The International Monetary Fund study estimated growth in 2006 at 7.8% and was projecting 9.4% growth for 2012.

The primary economic drivers of growth in phase 2 were *agricultural and other natural resources sectors*, supported by continued growth in urban services. Construction played a key role, both in terms of immediate growth and to help lay the foundation for sustained growth thereafter. Manufacturing activities accelerated, particularly those based on natural resource products. UN peacekeepers helped maintain security and boosted the economy. Rice, cassava, and other food production could continue to expand rapidly for several years, although the rebound was limited by poor roads that inhibit the availability of inputs and marketing options. Rubber, oil palm, and other plantation agriculture activities, along with timber, forest products, and biomass fuels, had the potential to accelerate very quickly as new concession agreements were signed. However, growth in these sectors was also constrained by poor roads and other infrastructure. Iron ore, diamonds, and other mining activities were expanded, led by the Arcelor Mittal ore mine concession and other mining concessions, augmented by a range of supporting activities. Services continued to expand, especially construction, retail trade, communications, hotels, and restaurants.

The key to sustainable and equitable economic growth in phase 3 was to encourage the *production of labour-intensive processing*, other manufacturing, and services, particularly for export. Liberia converted to a vibrant, diversified economy with the production of a wide range of manufactured goods, particularly those based on the processing of natural resource products, including furniture, wood products, agro-processing, horticulture, rubber products, tourism, toys, and simple jewellery. With the right environment, Liberian firms could compete on world markets for export to the region, Europe, and the United States. These activities created jobs for a large number of low skilled workers. As such, they were the foundation for widespread poverty reduction and more equitable distribution of income. This helped in diversifying the economy away from dependence on natural resources and overcoming the income disparities of the past.

8. Significant Steps of Governance Policy Through Prism of Complexity

To meet the challenges of achieving rapid, inclusive, and sustained socioeconomic growth, Liberia took advantage of the near term opportunities from agriculture and natural resource-based activities and established a foundation for diversification into downstream processing products, other manufacturing and service exports over time. Doing this was not easy in the backdrop of destroyed infrastructure, a legacy of deep social divisions, limited finances, and weak implementation capacity. Success was achieved through clear prioritisation, getting some basic choices right, and strong support from the international community. Government and donors avoided the temptation of trying to fix every problem and concentrated on a small number of key issues to create jobs and generate opportunities for large numbers of people. Four sets of actions stood out as key priorities for accelerating economic growth, as shown in Figure 7.

For the purpose of clarity, Figure 7 needs in-depth elucidation, which is covered in succeeding lines.

Building infrastructure was the most important action to stimulate equitable growth in agriculture, natural resource products, processing, manufacturing, and services. Roads throughout the country were in very poor condition. Only about 6% of Liberia's 10,000 kilometres were paved, and most of those were full of potholes. Roads were crucial to nearly every aspect of Liberia's recovery, such as maintaining security, connecting farmers to markets, creating jobs, reducing costs for manufacturing and effectively delivering basic health and education services. Roads were essential for reducing rural poverty, as they allow rural consumers to buy goods more cheaply and open new markets and economic opportunities for farmers and other rural producers. In addition, a strong road network enabled a more decentralised governance structure, with stronger county and local governments that could deliver services and attract skilled personnel. There were key choices to be made regarding which roads to build and repair first, how to finance them, and how to establish a system that ensures repair and upkeep over time. While the main urban roads needed to be repaired quickly since they carried huge amounts of traffic and connect ports, inclusive growth required building roads to connect rural areas and create opportunities for historically excluded groups. The government created that balance with its efforts by building roads in rural areas across the country. Ports were as central as roads, since they are a connection between Liberian markets and the rest of the world. Other infrastructures such as electricity and water were also crucial. Reliable and low-priced electricity was an important ingredient in making manufacturing and services competitive over time. Markets were also constructed for the facilitation of the public (Gul, 2012).

Figure 7

Key priorities for accelerating the economic growth

Source: author's own work.

Liberia's *natural resource-based activities* provided significant revenues for the government and created new job opportunities for many Liberians, which was a critical first step towards poverty reduction. Two steps were taken to ensure the gains from these activities were widely shared and to lay the foundation for a more diversified economy going forward. First, the effective management of the macroeconomy to mitigate potential negative incentive effects from natural resource exports. In other words, a real exchange rate was maintained that allowed firms to be competitive in world markets. Towards that end, funds generated by natural resource exports were used to finance infrastructure and other investments that reduced the production costs for manufactures and allowed them to be competitive in world markets. Second, models were implemented that encouraged rubber, palm oil, coffee and cocoa production in small and medium-size factories. Moving in this direction was critical to create jobs and build a more inclusive rural economy.

A third important action was to establish a *business environment* that kept production costs low and did not inhibit production. It was critical to establish a climate for investment in manufacturing and services over the medium term. One important way to keep manufactured exports competitive was to aggressively reduce unnecessary regulation. Unnecessary restrictions on imports or price controls were also removed. In addition, outdated tax and investment codes were revised so as to balance the need for revenues with the need for economic efficiency, vibrant private sector growth, and competitiveness. Thus, Liberia moved over time towards lower income tax and duty rates with a wider tax base, combined with strong and fair tax administration. The structure of import duties and taxes was reviewed and appropriately revised. The tariff rates on imported capital goods were lowered.

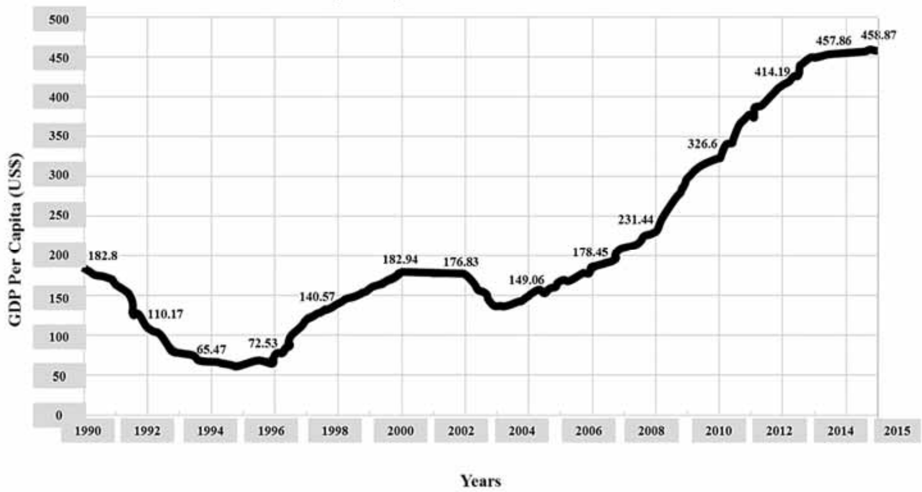
An entire generation of Liberians spent more time at war than in a classroom. Over the medium and long term, Liberia rebuilt its *education and training programs* to provide today's workers and future graduates with the skills they need to become productive members of the workforce. This required a combination of literacy training, technical training for skills in specific sectors, and rebuilding the formal education system. The government took a strong start by reopening schools and substantially increasing school enrolments.

9. Socioeconomic Ambience of Post Conflict Recovery

With four-pillar strategy and key policy actions through interconnected networks of heterogeneous agents of different systems, Liberia's economy was recovered from the global economic downturn. A trend of per capita GDP from 1990 to 2015 is indicated in Figure 8. This trend shows the performance of the Liberian Government after the election in 2005. There has been a sharp increase in GDP per capita from 2005 onwards, which is clearly visible in the graph.

Figure 8

GDP per capita from 1990 to 2015

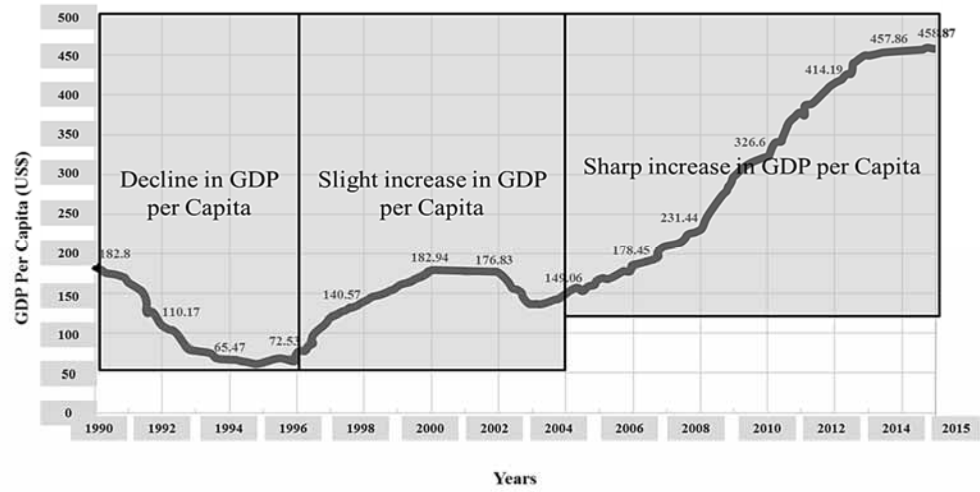


Source: author's own work.

To exactly understand the performance of institutional measures taken by the Liberian Government, the graph of GDP per capita was segmented. The resultant view is shown in Figure 9. Segmentation showed that there was a decline in the GDP per capita from 1990 to 1996.

Figure 9

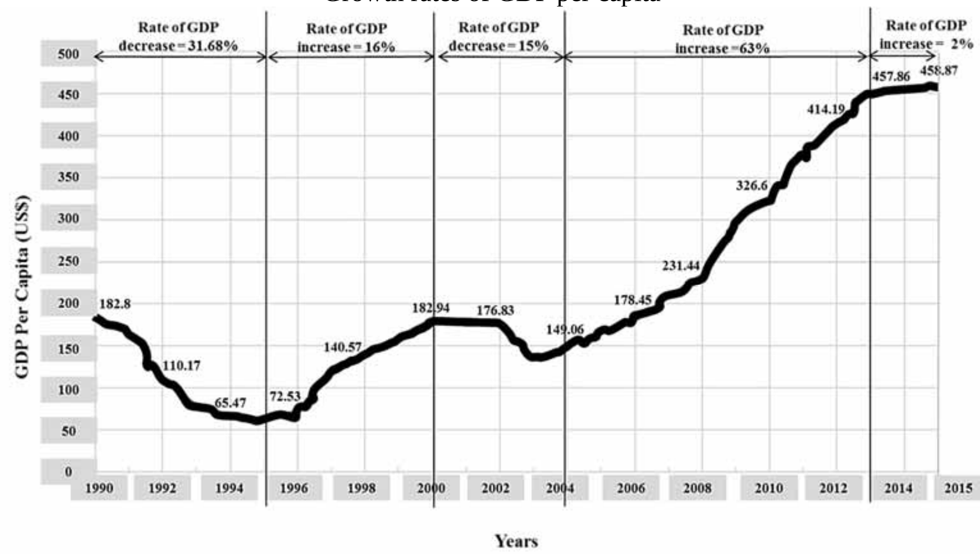
Segmentation of GDP performance



Source: author's own work.

Figure 10

Growth rates of GDP per capita



Source: author's own work.

There was a slight increase in the GDP per capita from 1997 to 2004. However, there was a sharp increase in the GDP per capita from 2005 onwards. As soon as the democratic process was restored and the elected government took charge of the state affairs, the GDP per capita boosted up. To further validate the point, growth rates for GDP per capita were calculated for different segments, which are shown in Figure 10. There was a decrease of 31.68 % in the GDP growth rate from 1990 to 1995. From 1996 to 2000, the growth rate increased by 16%. A decrease of 15% in the growth rate of GDP was noticed from 2000 to 2004.

10. Conclusions and Policy Recommendations

There is no doubt that complexity leadership and economics approach with associated institutional steps taken by the Liberian Government has initiated fast-paced sustainable socioeconomic growth from 2005 to 2014. This process of a fast journey on the road to prosperity has lessons for the underdeveloped and developing countries confronting insurgencies, wars and conflict situations. After a detailed analysis of Liberia's fast socio-economic growth, the following conclusions were drawn.

- For post-conflict socioeconomic recovery, conventional leadership and economics approaches are less valid owing to the complex situation with multifarious tasks. In such a scenario, complexity leadership and economics approach will work. This has been demonstrated by the Liberian government.
- People-centric policies with the bottom-top alignment of decisions are the best institutional model for post-conflict socioeconomic rebuilding. Heterogeneous agents (people) should have a say in the institutional process.
- Improved law and order situation, democratic process, efficient governance and enhanced institutional strength have helped Liberia to revitalise and accelerate its socio-economic growth.
- Institutional measures to curb corruption and ensure transparency has boosted economic growth in Liberia. These stringent institutional measures are very essential for underdeveloped and developing countries suffering deeply from corruption and lack of transparency in governance.
- Increased employment opportunities and community development programmes ensured households' wellbeing and participatory socio-economic development.
- Promotion of agriculture activities, judicious and sustainable utilisation of natural resources, up-gradation of manufacturing sectors have put Liberia on the track of long term sustainable development.
- The uplifting of infrastructure and services has accelerated socioeconomic development manifold.
- As a result of strong institutional and governance measures rooted in complexity theory, post-conflict growth rate of GDP per capita from 2005 to 2014 has been 63%.

Modus operandi adopted by the Liberian government for revitalising its economy can serve as a model for underdeveloped and developing countries, especially those fronting conflicts. From a policy point of view, strengthening institutions and effective governance is the key to long-lasting socio-economic development. Sustainable use of natural resources and diversification leads to an increase in export revenue. In the wake of the improved security situation, many investors from different countries of the globe are now investing in Liberia. The Challenge of transition from a period of post-conflict reconstruction to sustainable development has been skilfully handled by Liberian institutions. These institutions have been strengthened through a consistent democratic process from 2005 onwards. The institutional strength is reflected in the long term development vision of Liberia named *'Rising 2030'*. Liberia is now a strong exponent of regional integration. A well-articulated export policy exploring regional markets and shared regional infrastructure projects have boosted the development for the last few years. Non-African and African emerging partners are active in Liberia. In short, the Liberian model of socio-economic development is valid for many developing and underdeveloped countries of the globe.

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