

# Macro Corruption: A Conceptual Analysis of Its Dimensions and Forward and Backward Linkages

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**Abstract**—An attempt was made to fill the gap in the macro analysis of corruption by suggesting a conceptual framework that differentiates four types of macro corruption: state capture, political, bureaucratic and financial/corporate. The economic consequences or forward linkages (growth, inclusiveness and sustainability of development) and macro institutional determinants constituting the backward linkages of each type were delineated. The research implications of the macro perspective and proposed framework were discussed. Implications of the findings for theory, research and reform policies addressing macro corruption issues were discussed.

**Keywords**—Economic growth, Inclusive growth, macro corruption, sustainable development.

## I. INTRODUCTION

OVER the last three decades, the economic analysis of corruption has been gaining greater interest among academics, policy makers and international organizations. This is due to the ability of corruption to influence and penetrate the very roots of an economy through eroding property rights, distorting economic forces, inflicting and diverting public policies and straining political institutions. Economists have been interested for decades in trying to explain corruption and examine its economic consequences.

The literature on the economic impact of corruption at the aggregate level has been primarily focusing on economic growth (e.g. [21], [27], [33], [34], [36]-[38], [41], [46], [47]) and foreign investment and much less on other dimensions of economic development pertinent to inclusiveness such as poverty reduction, equity and distribution of economic opportunities, wealth, and employment.

There are conflicting arguments and results in the literature; some argue for the positive effect of corruption on growth due to the enhanced efficiency of the government procedure through lubricating the stiff wheels of its rigid administration. They suggest that this helps speeding up investment and growth [1], [11], [24], [30], [32]. Others provide the opposite views and argue for the negative influence of corruption on government efficiency and therefore growth [2], [10], [26], [27], [45]. Besides, the efficiency effect argument ignores the dynamic and total perspectives of the context in which corruption takes place [21], [39].

The problem of the macroeconomic analysis of corruption to a certain extent lies in the lack of a conceptual base that defines and analyzes the dimensions or components of

corruption at that level of analysis. The research conducted on the economic consequences and antecedents of corruption, besides lacking a solid macro theory and related variables deals with corruption in a fragmented way. Moreover, except for Aidt [6] on corruption and sustainable development, and Hodge et al. [21] on corruption and growth, most of the studies on the relationship between corruption and development did not fully examine the nature of the linkages. Since the available evidence was not originated from or based on theoretical foundation, it has not differentiated between various levels of results. Thus, in some studies, investment in physical and human capital, government expenditure and FDI were taken as development indicators; while in others, growth and per capita income were used as dependent variables representing development. Similarly, the studies on the factors impacting corruption suffer from various conceptual and methodological shortcomings. No theory exists on the macro dimensions or components of corruption that influence their occurrence at that level. The definition of corruption (abuse of authority to acquire personal/private gain) is more pertinent to the micro level, no definition provided suites the macro level of analysis.

With the conceptual/theoretical foundations set at the appropriate level of analysis and the dependent variables (in our case, the dimensions of development as the end result consequences of corruption), the key corruption dimensions are defined properly and the factors leading to corruption are identified; then, further examination of moderator, intervening or channel variables mediating the linkages could be additionally developed or integrated to enrich the conceptual framework and empirical findings. Over the last decade, the literature on corruption and its associated variables have made advances in identifying some of these variables but with a major focus on economic growth. The variables of these studies were selected in a fragmented way. This was due to the lack of theory and inadequate choice of the dependent variables of concern. With the focus on corruption at the aggregate macro level and its impact on inclusive growth and sustainable development, richer, more meaningful and useful results could be obtained.

Given the above gaps in corruption research, the present study has the following objectives:

1. To provide a conceptual/theoretical framework that identifies forward and backward linkages of corruption, examined from the macro/aggregate perspective. The frameworks will focus on the dimensions/variables constituting macro corruption and its forward and backward linkages.

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2. To briefly discuss the research and policy implications of the proposed framework.

## II. A PROPOSED CONCEPTUAL FRAMEWORK ON THE FORWARD AND BACKWARD LINKAGES OF MACRO CORRUPTION

In Fig. 1, the key factors around which the proposed framework is based are defined and discussed and the linkages identified.

### A. Macro Corruption and Its Dimensions

Most of the literature on corruption defines it as "the abuse

of public office to serve private/personal gains". The gains are extracted from the principle (society), who is unable to hold the agent (state, public employee or official) accountable due to high monitoring costs (e.g. [19], [47]). The definition focuses on bureaucratic corruption in the government and also the abuse of political authority by high-level policy makers such as ministers, high ministry officials and political representatives (e.g. parliamentarians) at the various levels of government.

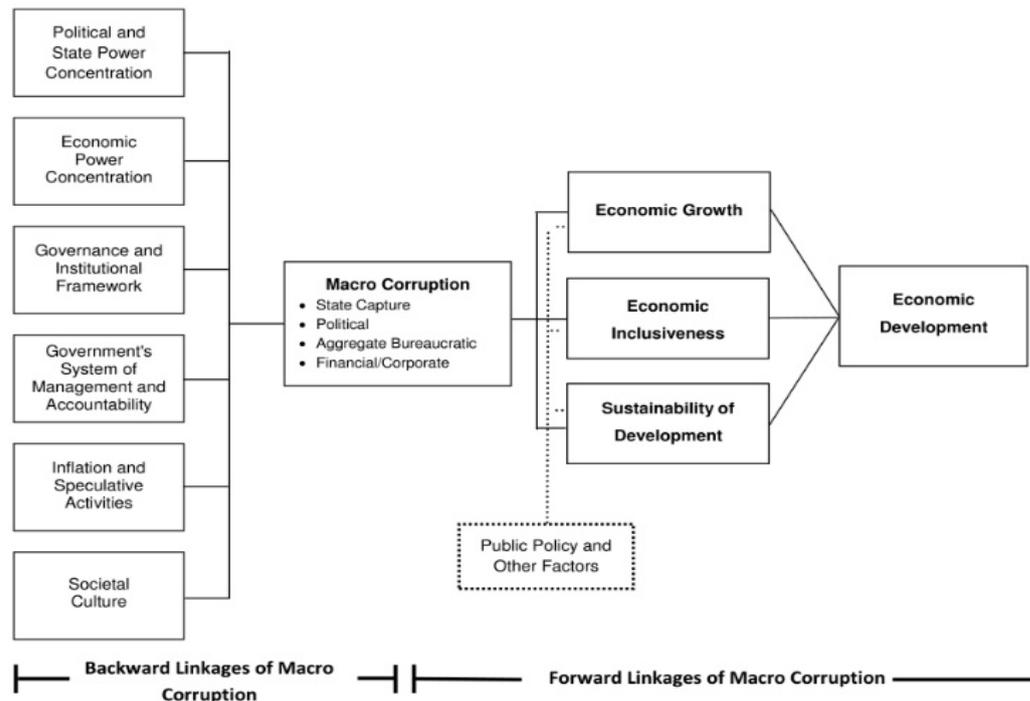


Fig. 1 Conceptual Framework of Economic and Institutional Linkages of Macro Corruption

The reference to the high monitoring cost associated with weak accountability assumes that the principal possesses power and is himself free of corruption. In reality, the principal is deputized or represented by top state officials such as the head of the state/government or its ministers and the legislative body with an assumption that they have the will to curb corruption but are constrained by the cost or lack of knowledge on how to do it. This view does not, as with most economic analysis of corruption, consider that the so-called principal, the principal's representatives and/or that the state oversight bodies may be infected themselves with corruption, as in the case of state capture. Most of the literature that confines the definition to the abuse of public authority for private or personal gain attributes that to weak institutions and the related accountability framework. Within this analysis, differentiation is made between political, grand and petty corruption and also between the different types of corruption taking place in the state bureaucracy (e.g. bribery, nepotism, trading in office, embezzlement, etc.). The analysis does not

differentiate micro from macro corruption and it oftentimes mixes the two.

If corruption is to be related to macroeconomic development indicators, it should be defined and analyzed at that level of analysis, the aggregate/macro level. This differentiation would not only enable better understanding of the phenomenon, but would have implications for research, reform and policymaking. Therefore, we can define macro corruption as "the abuse of power by some state institutions or minority segments of political or economic actors that results in capturing gains for these institutions or segments at the expense of the interest of the wider public or the society at large". According to this definition macro corruption results in the redirection and distortion of development policies; diversion and looting of national and state assets; distortion of economic and market forces; increasing transaction costs at the aggregate level and undermining the protection of property rights.

The above definition enables us to delineate the following

dimensions or types of macro corruption:

1. *State Capture Corruption*. It represents capturing key state institutions particularly policy-making bodies (cabinet or key ministries or institutions) and the legislative branch at the central and local levels by the elite groups. The purpose is to direct the public policies, legislations and regulations and to extract benefits that serve the interest of political/economic elite(s) (e.g. parties, business groups or social or ethnic groups). State capture corruption is different from ordinary forms of corruption in that it occurs when unclear boundaries between the political and business interests of state officials are exploited by specific elite groups and state officials for their mutual benefits, and when such groups and officials control the policy-making mechanisms of the state to assure the flow of these benefits. It is the most harmful form of corruption, as it entails subverting the critical organs of the state and the entire political process [14] to ensure that state regulations are favorable to the elites and the groups engaging in this type of control over the state and the political system.
2. *Political Corruption*. It represents the acquisition of political power through illegal and illegitimate means such as bribery of voters, forging elections, military or political coupe, oppressing political voice/participation, monopolizing political authority (lack of power circulation) and using lobbying tactics to serve the interests of a selected few against those of the majority of the public. The purpose is to acquire political leverage that can be translated into economic gains and to enable those who monopolize political/economic power to secure and enhance such power and increase their economic rent.
3. *Aggregate Bureaucratic Corruption*. It refers to the degree to which grand and petty corruption is widespread in the government and the extent to which it has penetrated various levels of its body. Extensive prevalence of such corruption would reflect on the quality, accessibility and equity of its services. The various types (grand and petty) and the different modalities of corruption (bribery, nepotism, embezzlement, extortion, trading in office, etc.) are likely to have different types of impact on the performance of public organizations and on the various public and service recipients they deal with, depending on the nature of the service (i.e. regulatory or support services) and the type of recipients (e.g. investors, private sector, household, or regular/marginalized citizens). However, the aggregate prevalence of bureaucratic corruption pertains to the overall deviation from integrity and ethical principles that should govern the practices of the government employees.
4. *Financial/Corporate Sector Corruption*. This type of corruption, if present and widespread among financial institutions such as banks, stock exchange, financial entities in the sector (e.g. Investment funds, holding companies and insurance companies), and the corporate sector in general can hamper the economy greatly. The history of national and international financial crises is full

of how a particular group of speculators, market manipulators or executives can bring the whole economy down through their manipulative practices that produce large gains for these actors, but widespread harms for the financial sector and the majority of its smaller actors as well as for the economy as a whole.

### III. FORWARD ECONOMIC LINKAGES OF MACRO CORRUPTION

In most of the studies on the macroeconomic consequences of corruption, only recently researchers have started to examine the impact of corruption or related institutional variables on dimensions of economic development other than growth, inclusive growth and sustainable development (e.g. [6], [42], [48]). Most of the studies have primarily focused on economic growth, despite that growth, while being a necessary condition for development, is not sufficient for or equivalent to it. It is well established now that growth by itself does not necessarily produce the type of economic development that benefits the wide base of a society, particularly the needy and marginalized, and nor that by itself assures sustainability of development in the longer term. We therefore decompose inclusive economic growth into three key dimensions: growth, inclusiveness of growth and sustainability of development. Although there is some mutual influences between these dimensions (e.g. inclusive growth can contribute to the sustainability of development), it is important to deal with each dimension separately for conceptual clarity and also for research and policy implications. We define and discuss these three dimensions in the following.

#### A. Economic Growth

The concept of economic growth refers to the increase in the per capita real income in the country and is measured by the percentage change in that per capita income. The positive growth rate of a country in a particular period results from the greater increase of the gross national product than the increase in the population of that country during that time. When the rate of growth is enhanced and accelerated it can surpass the population increase. To contribute to development (to make a tangible change in the economy and to impact on people's lives), growth needs to be enhanced and maintained over a significant period of time. Therefore, the magnitude and trend of the rate of growth over time is important for realizing its developmental impact. Policies that try to achieve that usually rely on expanding the productive base of the economy through increasing investment, production capacities and resource utilization as well as improving productivity of the factors of production in key sectors.

Despite the above research gaps, there is a growing consensus in the literature that corruption (in general) is responsible for the meager development achievement attained by certain regions such as Africa (e.g. [23]) and is responsible for the generation of poverty traps and economic inequity (e.g. [8], [12], [13]). A great deal of the research on the relationship between corruption and economic development has been absorbed by the debate on whether corruption contributes to or hinders growth. Such debate may have diverted the attention

away from providing conceptual clarification on the nature of aggregate or macro corruption and its linkages or paths to various economic development variables.

The literature focusing on the type of corruption that infects the political system (political corruption and state capture) (referred to by [50]), has focused primarily on the political system and institutions with much less interest in its macroeconomic consequences. Most of the research on the economic consequences of political corruption and state capture has used case studies and anecdotal data of particular country rulers and the wealth they looted from their countries, as in the majority of such literature on Africa (e.g. [7], [31]). Much of the studies conducted on corruption by political scientists tended to emphasize political and institutional variables with much less focus on complex development or economic variables. On the other hand, economic studies of corruption have tended to focus more on economic variables and much less on macro political variables (e.g. [5], [6], [48]). There seem to be a reluctance to fully cross boundaries of disciplines even though that corruption at the aggregate or macro level is a complex multi-faceted phenomenon that requires inter- and multi-disciplinary approaches.

#### *B. Intermediate Variables Contributing to Growth*

Economic growth is determined by the changes taking place in a number of intermediate variables. These variables constitute the prerequisites of growth. Important among these variables are the following:

- *Productivity.* Changes in productivity are a major determinant of growth. Improved productivity means increasing the national product relative to the factors of production utilized. It is a resultant of the productivity changes pertinent to the various factors. Total Factor Productivity (TFP) is taken nowadays to be an indicator of the capability of an economy. It reflects the changes in the output that cannot be explained by changes in the quantities of the various factors of production. It is the residual of the output growth after accounting for the changes in the factors of production.
- *Investment.* Change in the capital stock invested in economic activities is another key determinant of economic growth. It represents the change in the productive capacity of the economy. Increase in investment means enlarging this capacity, which in turn results in growth in output (provided that productivity does not decline at the same or greater rate). Investment could come from local (private and public) or international sources. Foreign Direct Investment (FDI) plays an important role in accelerating growth in national economies. FDI is sensitive to the attractiveness of the investment environment of the country.
- *Manufacturing Value Added.* Historically, manufacturing represents the driving force of economic development since it constitutes the productive activities that contain the most value added. It is the hub for modern production technology and modern business institutions besides possessing the greatest potential for growth. Although

there are now certain services that contain similar or even greater contribution to growth (i.e., knowledge and technology-based services: e.g. information technology, communication, innovation-based services, research and development, education, health services, information services) manufacturing still represents a key contributor to growth for many developing countries that do not have the knowledge and technology infrastructure required for this high value-adding services. Thus, Manufacturing Value Added (MVA) is an important contributor to the economic growth of countries on the initial phase of development.

- *Global Value Chain Participation.* The share of the country in the global value chain represents the position of the country in global trade measured in value-added rather than gross terms. In the current global economy, Global Value Chain Participation (GVCP) is another important driver of economic growth. It represents the degree to which the country is integrated with the global economy in forward and backward linkages in a way that impacts its value-added activities. It reflects the extent to which a given country contributes to the global processing of goods and services. It can be measured by cumulating the degrees of forward and backward integration [16].

#### *C. Economic Inclusiveness*

The concept of economic inclusiveness refers to the degree to which the various segments and sectors of society participate in and benefit from the growth in economic activities and their resultant outcomes. There is evidence from the experience of the fast-growing emerging economies that the leap forward they achieved resulted not only from enhancing, accelerating and maintaining growth, but also from making the growth inclusive. This is realized by getting the various segments, regions and sectors of the society to benefit disproportionately to their original standing on income, wealth and living standards (i.e. greater percent increase to the poor and marginalized than to wealthy and well-to-do segments and sectors). However, in many developing countries economic growth was not accompanied by such results. Looking at the situation across various countries in the world, income inequality has widened considerably since the early 1980, particularly as a result of economic liberalization and globalization policies, in addition to the impact of global economic crises. As a result, there is rising interest in inclusiveness and equity in the opportunities and gains associated with economic growth. Increasing and accelerating the rate of growth does not necessarily mean better income or standard of living for all segments of the population. In many situations the opposite could take place. Thus, growth could be associated with greater poverty and less equitable distribution of opportunities, gains or income, if the increase in national product goes to and benefit only a few. The trickle-down effect theory of growth promoted by international organizations for decades (1980s and 1990s) has been refuted by evidence. Various alternative approaches to development and growth have been promoted since the new millennium,

such as pro-poor, equitable and inclusive growth and development. The experiences of the emerging economies such as Asian countries and an increasing number of economies in Latin America have provided evidence that improving public services for all segments of the population, enhancing productivity across all regions and sectors of the economy and for the various factors of production along with enhancing the income and earning capacity of the poor through targeting them, result in enhancing growth and increasing equity and inclusiveness simultaneously. Thus, inclusiveness of growth refers to the extent to which the increase in per capita real income and other non-income components (education and health) of a country is associated with improvement in the equity of the distribution of income, non-income and living standard components. We suggest that inclusiveness pertains to two key dimensions:

- *Inclusiveness of key services and opportunities.* This entails providing equity in the distribution and accessibility of services (quantity and quality) contributing to human capital (education and health), physical capital (infrastructure: e.g. roads, water, sewage, electricity) and security services. This could be measured through the distribution of human capital, physical and security services. It also entails equity in the opportunities represented by access to markets, resources and employment by various segments (including gender) and regions; and the existence of an unbiased regulatory environment and support services for businesses (large and small enterprises) and individuals [15]. The equality of opportunities across various enterprises/firms and the empowerment of the smaller ones enable small and medium firms (which constitute the majority of business entities) to contribute to the acceleration and inclusiveness of growth as they are the greater source of employment and business innovation and growth. This is different from the pro-poor approach as it is not mainly and only concerned with the welfare of the poor but with the opportunities for the vast majority of the population and the labor force, poor and middle class alike [25] and also large and small enterprises alike.
- *Institutional inclusion.* The reference here is to the incorporation and integration of various economic actors in the level playing field. This requires the institutionalization and integration of the various economic activities and transactions in the formal economy. Institutionalization of economic activities and transactions helps to widen the base of the economy through enhancing connectedness among and opportunities for the various economic players. The existence of a large informal economic sector is indicative of weak inclusiveness. Besides, the marginalization of small and medium enterprises would also reflect a similar weakness.

#### *D. How Corruption Impacts Economic Growth*

We presume that all types of macro corruption contribute negatively to the rate, speed and continuity of growth:

- Political and state capture corruption redirects, manipulates and influences the political system and state powers to serve the interest of the elite political groups and not the growth or development of the total economy. This results in redirecting and diverting state resources and government policies/programs to serve the interests of the controlling elites, not necessarily the national interests. Under such conditions, growth will not be enhanced, accelerated or maintained. In the extreme cases of these types of corruption, the assets of the state and the society are transferred to private groups. This limits their use in enlarging the base of productive capacities of the economy. The increase in wealth of the powerful groups/elites is not generated through productive/value adding activities, as it is acquired through corrupt deals and rent-based activities.
- Aggregate bureaucratic corruption, besides representing a waste of government resources and spoiling of its programs, implies increase in cost of investment and higher transaction costs for the total economy in general. Besides, it results in diffusion and distortion of government services due to the inefficiency of government operations. Under severe bureaucratic corruption the government becomes a burden on the economy, thus hurting its growth capabilities and potential.
- Financial and corporate sector corruption and the related speculative activities increase the rent-based sources of income and wealth of the elites. And, as the productive value adding activities tend to be less attractive for a larger part of the population; this hurts the enhancement, acceleration and maintenance of the growth rate. Additionally, financial sector corruption greatly hinders growth through creating disruptive and distorting forces that cause financial and economic crisis. It disturbs the functioning of the whole economy if it is widespread. The speculative and corrupt financial practices by financial institutions and the corporate executives are the main triggering force for these crises. Gaps, loopholes and weaknesses in the regulatory framework allow corruption and rent-seeking activities to cause such collapses in the whole economy.

#### *E. How Macro Corruption Impacts Economic Inclusiveness*

Inclusiveness of growth widens the base of contributors and beneficiaries. It is proposed that macro level corruption impacts inclusive growth through the following linkages and mechanisms:

- State capture corruption directs state policies to serve large businesses with almost total negligence of equity and equality of opportunities and with no concern to the unemployed, the poor and the small enterprises. The regulatory environment under this type of corruption is designed and implemented to serve those belonging to the clique that controls the legislative branch, the head of the state and the government cabinet as well as oversight agencies. Under such conditions, public policies and the

pseudo institutional and administrative reform, and even economic policy reform or the anti-corruption initiatives are adopted and applied without real political will. In fact, these policies are designed in a way so that the burden avoids inflicting losses and may harm the interests of the ruling elite. The state resources and capacity are directed to serve those elite. Short term increase in the growth rate may take place, but due to these biased policies, their effects do not significantly trickle down, simply because the ruling clique did not design them to produce such effects. Income and wealth disparity increases greatly, and the economy and its key sectors are controlled by the monopolies owned by the ruling elite/cliq. Poor and marginalized businesses operate in the informal sector. Illegal/illegitimate economic and rent-seeking (non-value adding unproductive) activities of a large segment of the population and most economic actors become prevalent. Under such conditions growth is stagnant or slow due to weak inclusiveness.

- Political corruption seeks to influence, manipulate or forge the elections to control the legislative branch and/or the presidency and other elected officials (e.g. local councils). The aim is to get the benefits and gains associated with these positions but more importantly to direct the decisions and policies of these bodies to serve the interests of these actors or their cronies. The poor voters are often bribed to give their vote to the wealthy candidates or those belonging to socially powerful segments, families or tribes. The end result of those corrupt politicians reaching these positions is the diversion of public resources and policies and the distortion of the role of the political institutions and perhaps the whole political system. As a result, development and economic policies would not be directed to serve the interests and needs of the various segments and economic actors, as the power of corrupt officials is directed to maximizing their gain while in office, and oftentimes, to get them to monopolize the political arena. Gaps in democratic governance continue to increase and the whole system falls into the vicious circle trap of weak political and institutional reform and limited economic performance.
- When bureaucratic corruption is prevalent and widespread due to complex procedures, excessive regulations, red tape and weak accountability, government organizations are not only inefficient or ineffective, but also become a source of waste of state resources and a burden on society and the economy. The aggregate effect of bureaucratic corruption is a delusion of government programs and budgets. Rather than being a catalyst or supporter of growth and a balancing and a corrective force (rectifying market deficiencies/imbalances) to achieve equity and inclusion, governments infected intensively by such corruption, lose by definition the ability to play such roles. Government programs that were originally initiated to achieve equity, may likely be a source of disparity and inequity. There are numerous examples of how subsidies

and free government services turn to be a domain for corruption and therefore may achieve the opposite results of what they were created for. Bureaucratic corruption creates waste not only on the expenditure side but also on the revenue collection side. The result is greater budget deficit and inflated public debt, which may turn to be a deep-rooted problem resulting often in chronic inflation that mostly harms the poor and wage earners, thus resulting in reduced equity. That, in addition, creates a tendency to engage in speculative activities that further fuel the original problem and ends up in further widening income disparity and worsening inequity.

- Financial sector corruption disrupts the economy, delays its path to growth and harms primarily the weaker economic segments and players (e.g. workers who lose their jobs and vulnerable small enterprises that collapse and get out of the market). The losses of the rich are relative because they would likely have reserve assets. But the losses incurred by the poor tend to be relatively absolute, as they usually do not have anything but their working and income earning capacities. Besides, small business owners can also be similarly victimized.

#### *F. Sustainability of Economic Development*

Sustainable economic development pertains to the ability of an economy to maintain or increase the living standards through time, meaning not to compromise the living standards of the future generation by attending to those of the current generation. Growth in GDP per capita is no guarantee for long-run sustainability. Ultimately, economic development is primarily concerned with sustainable improvement in human welfare. When sustainability is not considered, it is possible that an observed increase in the growth rate of GDP per capita over a period of years may be associated with a fall in inter-temporal social and material welfare when the consequences for future generations are not considered [6]. Therefore sustainable economic development is generally defined as present economic paths through which growth is realized that do not compromise the well-being of future generations [51], and more specifically, when the social and material welfare of an economy does not decrease over time during the development path taken. Sustainability requires that the inter-temporal social and material welfare is not declining over time [6]. It implies that all the capital assets or the productive base and other life resources increase or at least not decline over time. Capital assets representing the core of sustainability include human and social capital, financial and material assets, knowledge and technological capital, cultural and heritage assets, and ecological and natural resource assets. These various types of assets do not only represent the productive capacity of an economy, but they also include the soft assets and resources (e.g. cultural and heritage assets and aesthetic features of nature) that contribute to the welfare and happiness of people.

### *G.How Macro Corruption Impacts Sustainable Development*

Corruption has the potential to undermine sustainable economic development in a variety of ways. The following delineates such impacts:

- State capture and political corruption restrict the state capacity to develop policies that foster long-range development and reduce its ability to regulate and exercise control over activities that harm the capital assets of a country. Sustainable development requires maintenance, preservation and suitable investment in the economy's capital assets. Corruption in the policies and institutions related to these assets would result in depletion, deterioration and lack of investment in the pertinent assets. Corruption in the political system and state policy-making and regulatory institutions causes a diversion of programs and state funds designated for building capital assets of a country to serve private, and usually consumption, ends. The privatization schemes under this type of corruption is likely to be loaded with kick-backs and bribes to facilitate the selling of public assets at reduced prices and returns going to the state but with private "rentier" gains captured by the corrupt officials, politicians, and buying entities. In such situations, privatization does not result in improving the capacity of such assets. Under this type of corruption oversight and regulatory bodies avoid exercising their power over the political and powerful business clique who influence policy making, often at the highest level. There is also abundant evidence generated from research on the so-called "natural resource curse", as the abundance of such resources, with the existence of rampant corruption and poorly developed political system and institutions, results in fostering a "rentier" economy (e. g. [10], [22], [29], [35], [43]), which crowds out investment in manufacturing and human capital. It also results in misallocating talent away from innovative activities to rent seeking [1], [20], [40] and encourages growth-harming increases in government consumption [9].
- Aggregate bureaucratic corruption results usually in providing a disincentive to private investment, as it represents additional costs to investors [12], [13], [18], [28], [31], [33], [34] and an implicit tax on international investors [49]. Although bureaucratic corruption tends to increase public investment, especially inefficient capital-intensive ("white elephants"), as it is associated not only with a stream of bribe income [44], but also with poor quality of infrastructure, i.e. with investment of substandard quality. Bureaucratic corruption diverts budget programs directed to preserving and developing national assets to serve the private ends of bureaucratic employees and officials and their cronies. For example, corrupt institutions specialized in environmental protection and regulation let go of serious violation of environmental standards by business firms. There is abundant evidence on the close association between extraction of natural resources, resource rents and

corruption resulting in environmental degradation. Similarly, heritage assets and antiquities are smuggled out of the country through the complacency of the concerned officials with the smuggling parties. The same applies to research funds designated for improvement of knowledge assets that end up in paying salaries and conducting studies of no significant value; pseudo research.

- Corruption in the financial sector resulting in financial crisis represents a serious disturbance to the continuity and stability of the growth path, and thus harms the sustainability of development. The loss of assets and lack of funds to preserve other assets represent major blows to the stock of development capital. The inflation associated with the rent-seeking financial manipulation and speculative gains results in damages to various appropriations to value adding productive sectors.

### IV. BACKWARD INSTITUTIONAL LINKAGES OF MACRO CORRUPTION

This section analyzes the factors constituting the backward linkages of macro corruption. These factors belong to the concentration of power in the political and state system and in the economic system, the institutional framework governing state policy and decision making, government system of management and accountability, inflation and speculative activities and societal culture.

#### *A. Political and State Power Concentration*

Political and state systems that have mechanisms and safeguards against the monopolization of political power and that includes checks and balances with participatory and accountability frameworks, are less likely to be subject of political and state corruption. The vulnerability of the political system and state organs to corruption is reduced proportionately to the availability of these mechanisms and safeguards. Authoritarian regimes and state systems that do not separate state powers, where their accountability to the society is minimized and political officials are not subjected to the will of people, are likely to be infected by various types of corruption. Under such conditions, certain social or political groups or clans, foreign or local business interests, or segments of the population can easily get various preferential treatments or favors from the state. State institutions suffer from relative weaknesses *vis-à-vis* such groups or segments. When the state is ruled by some particular elite, the extraction of benefits takes place directly through the hegemony over the policy-making positions in the state bodies. There is evidence that dysfunctional political institutions, due to dictatorship and concentration of political power, enable corrupt politicians to extract unpredictable rents, inducing less powerful economic players to shift from the formal to informal sector where they can find refuge [3], [4], [17].

#### *B. Economic Power Concentration*

The degree to which economic power is concentrated in key sectors with weak accountability, meaning being monopolized by a few players, would likely give rise to these players exerting influence on the policy-making bodies of the state to

influence public policies primarily to serve their interest, make gains and defuse and reduce the regulatory role of government bodies regarding their business activities. Such attempts are done through large oligarchic businesses bribing and exchanging benefits with politicians and high public officials and through eventually seeking positions in the political institutions (e.g. ruling party, parliament or government cabinet) as a means to better guarantee their influence and realize their interests. The result is greater rents for the powerful economic players and more fortification of their position in the economic and political arenas.

#### *C. Governance and Institutional Framework*

Gaps and weaknesses in the governance structure and the institutions which balance and regulate power distribution (political, economic or otherwise), manage the economy, regulate markets and account for the practices of its powerful players, represent ingredients for the emergence of grand political and economic corruption, including the use of state institutions to extract benefits for the powerful elites and the ruling groups. The weakness in the institutional framework will entice those groups to influence directly or indirectly the decision-making bodies and the practices of the government to their benefits. Lack of transparency and accountability in such a framework will contribute also to the rise of bureaucratic corruption. Additionally, weakness in the institutional framework that governed liberalization of transition economies and market transformation and economic globalization of many developing countries during the last few decades have given rise to the proliferation of corrupt practices in areas such as selling state assets through privatization and concessions, extracting and squeezing tax benefits from the state and evading state regulations. Institutional weaknesses may act as drivers of both excessive regulation/interventions and corruption at the same time [39]; thus, getting institutional weaknesses, excessive regulations and corruption to become a vicious circle.

#### *D. Government's System of Management and Accountability*

There are abundant analysis and evidence regarding the role of the management system, governance and the accountability system by which government organizations operate in preventing/restricting or enhancing bureaucratic corruption. Traditional public administration system that relies on elaborate and complicated rules and procedures, with no strategic or results orientation, no focus on the clients, reliance on non-transparent practices and low access to information, using line-item budget, with large discretion not accompanied by the proper accountability, and no provisions to enhance integrity and prevent corruption; are likely to be infected strongly by bureaucratic corruption especially when competence is not sought and employee wages are low. Bureaucratic corruption is determined by the gaps and loopholes in the institutional framework characterizing government administration.

#### *E. Inflation and Speculative Activities*

Economies characterized by high inflation due to

monopolistic market structure and related business practices, ineffective fiscal and monetary policies, poor economic development policies and rent-seeking activities serve to drive business groups who own assets to engage in speculative activities and government employees to compensate for the loss in real wages by engaging in corrupt practices. How the financial sector is structured and regulated determines to what extent this will limit or promote speculative, rent-seeking and corruption activities that impact the whole economy. Economies so characterized are likely to be corrupted in key sectors of the economy.

#### *F. Societal Culture*

Countries vary in their value system, ethical norms and tolerance towards various types of corruption. Most of the literature on corruption recognizes the role of societal culture in the spread or containment of corruption. However, very little research has been done to clarify how cultural values, norms, beliefs, traditions and tribal or ethnic structure of the society affect attitudes and tolerance towards corruption and its various types. We suggest that societal culture and its various components or dimensions could play an important role in affecting the types and levels of corruption at the aggregate and micro level. Religious belief systems and the extent to which they are deeply rooted in the societal culture, constitute an important source of the values and ethical norms towards wrong doing and corrupt acts.

#### V. RESEARCH IMPLICATIONS OF THE PROPOSED FRAMEWORK

The above framework and its associated analysis suggest that there is a need to have a new perspective on corruption and its linkages at the macro level. Macro corruption needs to be differentiated from micro corruption, and implies different dimensions and focus. Examining the macroeconomic developmental consequences of corruption needs to be based on a conceptual clarification of the nature of economic development. The cumulative work done over the last two decades on this topic indicates clearly that development cannot be reduced to growth rate. Development means enhancing the opportunities, capacities, earning power and living standards for all segments and sectors of the society/economy. The focus now is on equitable or inclusive growth, not merely per capita growth, as the later may hide gross inequities that cannot be lasting or stable. There is also an equal emphasis on long-range equity and development sustainability. Over the long run, real development is about preserving or enhancing the stock and capacity of various capital assets, which the society possesses. Inclusive growth and sustainable development are what corruption impacts the most. It undermines the equity among current as well as generational segments of the society. Therefore, it is about time to shift the focus from mere growth to the true dimension of economic development. This will not exclude corruption implications for other sub-components of development or for intermediate results such as investment, barriers to entry, allocation of public expenditures, transaction costs, and cost and quality of infrastructure projects. These are important and

interesting consequences of corruption. However, they do not represent end-result development indicators, nor does per capita growth.

The proposed conceptual framework and the idea of forward and backward linkages of corruption analyzed at the macro level, provides an opportunity to systematically examine the macro consequences and pre-conditions of corruption. This offers more conceptual clarity and would likely contribute to resolving the conflicting evidence and ambiguities characterizing some of the research in this area (see reviews by [5], [6], [47]). Consistency in the conceptualization and the associated level of analysis of corruption and its linkages is likely to contribute to a better understanding of corruption and more effective accumulation of empirical evidence and knowledge about its nature and correlates at the various levels of its occurrence.

Most empirical analysis of corruption and its correlates have been constrained by availability of indicators and data. And, most of such data was not gathered or established based on a conceptual formulation that differentiates between macro and micro corruption. It is, therefore, worthy to invest in improving the conceptualization of corruption and in analyzing its developmental impacts along with its causes and correlates at the macro and micro levels. The previous conceptualization is a modest contribution to that end. Once enough progress has been made in this direction, data should be generated to correspond to the concepts developed. In the meantime, proxy indicators can be carefully used, but with the qualification that the data contain proxy indicators and that results coming from their analysis would be highly tentative.

Future research (as we have partly attempted in the subsequent section) could focus on a number of streams: (1) to examine the forward linkages of each type of macro corruption to the various dimensions/components of inclusive growth and sustainable development. This requires examining the intermediate channels or transmission paths through which each corruption type impacts or is associated with the particular dimensions and variables of economic development as delineated in the proposed framework; (2) similar stream of research should be conducted with regard to the factors impacting or associated with each type of macro corruption; along with examining the interaction between various socio-political, economic and institutional factors and conditions for each of the corruption types and their interactions; this is needed for the clarification of how certain types of macro corruption evolve, grow, transform, stabilize, fortify or decline (including the mechanisms and processes by which their beneficiaries engage in various types of tactics to protect their positions and gains). In this regard, the quantitative research should be supplemented by qualitative and case study research to further understand the processes involved; (3) to test the relations (association, causation and its directionality; time series; comparative cross- sections of countries; and linear and non-linear) deduced from the conceptual framework suggested in this report; (4) to identify and examine intermediate contingencies/variable moderating, mediating, intervening or confounding the relations between corruption dimensions and

its developmental consequences as well as its political, institutional, economic and cultural antecedents; and finally, (5) to develop the appropriate measures and relevant data bases that correspond to pertinent constructs of the dimensions/variables of macro corruption and those of the forward and backward linkages. At present, a great part of the data bases (with the exception of the Governance Indicators of the World Bank) have been developed to fit multiple purposes and contain proxy indicators that do not always fit the conceptual constructs or the level of analysis required by the proposed macro perspective.

The advancement in understanding the macro aspects of corruption and its related factors should provide great help to policy makers around the world, particularly in countries experiencing serious development problems associated with systemic corruption at the macro level. Policy-driven studies that suit the needs of particular country/countries based on the findings and conclusions derived from the above suggested research, represent an additional source for advancing knowledge about corruption, while at the same time, helping the reform initiatives in the concerned countries.

An additional implication of the proposed analysis is in order. The emerging literature on the sectorial approach tackling corruption needs to be qualified. It is true that corruption in various sectors (e.g. health, education and infrastructure) has different features and causes. But addressing corruption in the sectors without dealing with the root causes in the state and political systems and in the government's system of management and accountability would have limited impact. The United Nations and number of other international organizations have been advocating the sectorial approach, as it is difficult to require these organizations to suggest addressing issues such as state capture or political corruption. These organizations circumvent such issues as they represent and are composed of member states. Even the UN Convention Against Corruption (UNCAC), which represents the most recent international agreement, did not address issues of state capture or political corruption (with the exception of political finance). State capture and political corruption dominate many developing regions, particularly Africa.

Additionally, even though political corruption and its determinants impact a chain of variables that influence growth indicators/contributors, they are the most difficult to address and change. In the presence of undemocratic and politically corrupt regimes, especially in the cases of state capture as it is the situation in numerous African countries (past and present), it would not make sense to request from the capturing and corrupting elites to give up their power or to introduce true political reforms. Such changes would mean relinquishing the huge benefits they are extracting. The parties that need to be addressed are the people themselves. And, the irony is that international organizations deal with state governments not people, which are the real dilemma of addressing political corruption and state capture.

## IV. CONCLUSIONS

We have advanced an argument for the macro analysis of corruption and its economic developmental consequences (or forward linkages) and institutional determinants (or backward linkages), by suggesting a conceptual framework that clarifies these linkages. We differentiated between four types of macro corruption: state capture, political, bureaucratic and financial/corporate. This level of analysis has major implications for the research on corruption not only with regard to the type of variables and their linkages, but also with regard to the type of measures and data that need to be developed to serve this macro perspective. At present, there is a paucity of measures and data on corruption and its linkages that supports research at this macro level.

This is much needed to understand the complex and interwoven connections and dynamics by which corruption evolves and impacts. New measures need to be developed to enable researchers and policy makers alike to address issues and problems related to macro corruption. Lack of information on such aspects, hinders research and policy making that are directed, for example, to reduce the burden of corruption on the poor and to improve inclusiveness and economy equity.

## REFERENCES

- [1] D. Acemoglu and T. Verdier, "Property rights, corruption and the allocation of talent: A general equilibrium approach" in *Economic Journal*, vol. 108, 1998, pp. 1381-1403.
- [2] S. Aidt, "Economic analysis of corruption: A survey" in *Economic Journal*, no.113, 2003, 632- 652.
- [3] S. Aidt, J. Dutta, and V. Sena, "Growth, governance and corruption in the presence of threshold effects: theory and evidence". *Cambridge Working Papers in Economics*. Cambridge: University of Cambridge, 2005.
- [4] S. Aidt, J. Dutta, and V. Sena, "Governance regimes, corruption and growth: theory and evidence" in *Journal of Comparative Economics*, vol. 36, no. 2, 2008, pp. 195-220.
- [5] S. Aidt, "Corruption, institutions and economic development". *Working Papers in Economics 0918*, 2009.
- [6] S. Aidt, "Corruption and sustainable development. Cambridge". *Working Papers in Economics 1061*, Faculty of Economics, University of Cambridge, 2010.
- [7] C. Ake, *Democracy and Development in Africa*. Washington DC: The Brookings Institutions, 1996.
- [8] C. Andrić, and O. Moene, "How corruption may corrupt" in *Journal of Economic Behavior and Organization*, vol. 13, no. 1, 1996, pp. 63-76.
- [9] G. Atkinson, and K. Hamilton, "Saving, growth and the resource curse hypothesis", in *World Development*, vol. 31, 2003, pp. 1793-1807.
- [10] M. Auty, *Sustaining development in mineral economies*. London: Routledge, 1993.
- [11] P. Beck, and M. Maher, "A comparison of bribery and bidding in thin markets" in *Economics Letters*, vol. 20, no. 1, 1986, pp. 1-5.
- [12] K. Blackburn, B. Niloy, and H. Emranul, "The incidence and persistence of corruption in economic development" in *Journal of Economic Dynamics and Control*, vol. 30, 2006, pp. 2447- 2467.
- [13] K. Blackburn, B. Niloy, and H. Emranul, "Endogenous corruption in economic development". *Unpublished Working Paper*, Department of Economics, University of Wisconsin, 2008.
- [14] G. Broadman, and R. Francesca, "Seeds of corruption - Do market institutions matter?" Policy, Research working paper; no. WPS 2368. Washington, DC: World Bank, 2000.
- [15] Commission on Growth and Development. *The growth report strategies for sustained growth and inclusive development*. Washington, DC: The International Bank for Reconstruction and Development- The World Bank, 2008.
- [16] P. Conceição, R. Fuentes-Nieva, L. Horn-Phathanothai, and A. Ngororano, "Food security and human development in Africa: Strategic considerations and directions for further research in *African Development Review*, vol. 23, no. 2, 2011, pp. 237-246.
- [17] C. Drury, J. Kriekhaus, and M. Lusztig, "Corruption, democracy, and economic growth" in *International Political Science Review*, vol. 27, no. 2, 2006, pp. 121-136.
- [18] J. Ellis, and F. John. "Corruption and transparency in a growth model" in *International Tax and Public Finance*, vol. 13, no. 2-3, 2006, pp. 115-149.
- [19] N. Groenendijk, "A principal-agent model of corruption" in *Crime, Law & Social Change*, vol. 27, 1997, 207-229.
- [20] T. Gylfason, "Natural resources, education and economic development" in *European Economic Review*, vol. 45, 2001, pp. 847-859.
- [21] A. Hodge, S. Shankar, D. Rao, and A. Duhs, "Exploring the links between corruption and growth" in *Review of Development Economics*, vol. 15, no. 3, 2011, pp. 474-490.
- [22] Hodler, R. (2006). The curse of natural resources in fractionalized countries. *European Economic Review*, 50, 1367-1386.
- [23] M. Humphreys, and R. Bates, "Political institutions and economic policies: Lessons from Africa" in *British Journal of Political Science*, vol. 35, 2005, 403-428.
- [24] P. Huntington, *Political Order in Changing Societies*. New Haven, Conn.: Yale University Press, 1968.
- [25] E. Ianchovichina, and S. Lundstrom, "Inclusive growth analytics: Framework and application.", *Policy Research Working Paper No. 4851*. Washington DC: World Bank, 2009.
- [26] D. Kaufmann, "Corruption: The facts" in *Foreign Policy*, vol. 107, 1997, 114-131.
- [27] D. Kaufmann, and S. Wei, "Does "grease money" speed up the wheels of commerce?", National Bureau of Economic Research, Inc, *NBER Working Papers: 7093*, 1999.
- [28] P. Krusell, and J. Rios-Rull, "Vested interests in a positive theory of stagnation and growth" in *Review of Economic Studies*, vol. 63, 1996, pp. 301-329.
- [29] R. Lane, and A. Tornell, "Power, growth, and the voracity effect" in *Journal of Economic Growth*, vol. 1, no. 2, 1996, 213-41.
- [30] N. Leff, "Economic development through bureaucratic corruption" in *American Behavioral Scientist*, vol. 8, no. 3, 1964, pp. 8-14.
- [31] C. Leith and M. Lofchie, "The Case of Ghana," in Robert H. Bates and Anne O. Krueger, *Political and Economic Interactions in Economic Policy Reform*. Oxford: Blackwell, 1993.
- [32] T. Lui, "An equilibrium queuing model of bribery" in *Journal of Political Economy*, vol. 93, no. 4, 1985, pp. 760-81.
- [33] P. Mauro, "Corruption and growth" in *Quarterly Journal of Economics*, vol. 110, 1995, pp. 681-712.
- [34] P. Mauro, "Corruption and composition of government expenditure" in *Journal of Public Economics*, vol. 69, 1998, pp. 263-279.
- [35] H. Mehlum, M. Karland T. Ragnar, "Institutions and the resource curse" in *Economic Journal*, vol. 116, no. 508, 2006, pp. 1-20.
- [36] H. Mo, "Corruption and economic growth" in *Journal of Comparative Economics*, vol. 29, 2001, pp. 66-79.
- [37] M. Murphy, S. Andrei and V. Robert, "The allocation of talent: Implications for growth" in *Quarterly Journal of Economics*, vol.106, 1991, pp. 503-530.
- [38] M. Murphy, S. Andrei and V. Robert, "Why is rent seeking so costly to growth?" in *American Economic Review*, vol. 83, 1993, pp. 409-414.
- [39] G. Myrdal, *Asian Drama: An Inquiry into the Poverty of Nations*. New York: Twentieth Century Fund, 1968.
- [40] E. Papurakis, and G. Reyer, "Resource windfalls, investment, and long-term income" in *Resource Policy*, vol. 31, 2006, pp. 117-1128.
- [41] L. Pellegrini, and R. Gerlagh, "Corruption's effect on growth and its transmission channels" in *Kyklos*, vol. 57, 2004, pp. 429-456.
- [42] L. Pritchett, and E. Werker, "Developing the guts of a GUT (Grand Unified Theory): Elite commitment and inclusive growth. ESID Working Paper Series 16/12, 2012.
- [43] A. Robinson, R. Torvik, and T. Verdier, T. "Political foundations of the resource curse" in *Journal of Development Economics*, vol. 79, 2006, pp. 447-468.
- [44] S. Rose-Ackerman, *Corruption and government, causes, consequences and reform*. Cambridge UK: Cambridge University Press, 1999.
- [45] A. Seyf, "Corruption and development: A study of conflict" in *Development in Practice*, vol. 11, no. 5, 2001, pp. 597-605.
- [46] V. Tanzi, "Corruption around the world: Causes, consequences, scope and cures" in *IMF Staff Papers*, vol. 45, no. 4, 1998, pp. 559-594.
- [47] M. Ugur and N. Dasgupta, *Evidence on the economic growth impacts of corruption in low income countries and beyond: A systematic review*.

London: EPPI-Centre, Social Science Research Unit, Institute of Education, University of London, 2001.

- [48] B. Venard, "Institutions, corruption and sustainable development" in *Economic Bulletin*, vol. 33, no. 4, 2013, pp. 2545-2562.
- [49] S. Wei, "How taxing is corruption on international investors?" in *Review of Economics and Statistics*, vol. 82, no. 1, 2000, pp. 1-11.
- [50] World Bank, *Literature survey on state capture, grand corruption and political corruption*. Public Sector Governance, Poverty Reduction & Economic Management (PREM), 2010.
- [51] World Commission, *Our common future*. New York: Oxford University Press, 1997.