Empirical Study of Africa Macroeconomic Fundamentals Mismatch: Impact on Economic Development in Kenya

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Abstract

This paper is an analysis of the extent of macroeconomic fundamentals mismatch and the consequent impact on economic development in Africa, a case of Kenya. A key contribution of this paper is to show that the macroeconomic variables such as finance, unemployment, international trade, government fiscal policies, as well as savings and investments by firms and households interact in the Kenya's economy; and their total negative impacts owing to misalignment with key trade sectors contributing the most to economic growth, account for the country's weak pecuniary performance; a trend replicable in the larger Africa. The study employed quantitative research design using a self-administered questionnaire and targeted a population of 47 managers who are regulators, and commercial bankers, working within Nairobi, Kenya's capital. Both secondary and primary sources of data were used in eliciting the requisite information essential for the research findings. Stratified random sampling was employed to select the sample data. The Statistical Package for the Social Sciences (SPSS) version 20.0 was used in data processing and analyses. The findings indicate that the mismatch of macroeconomic fundamentals in Kenya is significant, with a p = 0.0001, and has far reaching negative impacts on the country's economic development. Government fiscal policies, exports, and finance, had more devastating negative impacts on economic development in Kenya. There is a general trend indicating that firms and households tended to take advantage of investment opportunities despite the unfavourable environment.

Keywords: Mismatch, GDP, Macroeconomic Fundamentals, Unemployment, Money, Savings, Investments, Trends

Introduction

Macroeconomic fundamentals are the broader national economic variables or drivers that influence a nation's economic prosperity as they impact on its business sectors. They are the anchors of a nation's entire economic process, and determinants of its Gross Domestic Product (GDP). Essentially, they deduce both positive and negative impacts on economic intensification hence the need for premeditated alignment with designate national trade and industry augmentation pillars. For example; since African countries, including Kenya, import essential commodities such as food, skilled and idle workforce should be engaged in food production to impact GDP positively. GDP is an essential output indicator as it reflects each citizen's contribution to the nation's productive capacities (Aiginger & Vogel, 2015).

The macroeconomic fundamentals, such as unemployment, finance, exports, savings and investments by firms and households, as well as government fiscal policies interact with each other in the markets for goods and services, and their impacts are either positive or negative on the business sectors of the Kenyan economy.

Kenya's economic growth blue print, the vision 2030 now on its 11th year identifies tourism, agriculture, manufacturing, offshore service provision, financial services, as well as retail and wholesale trade sectors, as the vertebrae of economic development (Kenya Vision 2030, 2007). It set targets for the country's level of economic growth to rise by about 10 percentage points by 2012/2013 period and then remain above 9% thereafter. Notwithstanding, little gains in economic development persist within the sectors, although the vision is supported by a secretariat.

According to the Kenya National Bureau of Statistics (KNBS) (2015), the agricultural sector's growth declined from 5.2% in 2013 to 3.5% in 2014; the manufacturing sector's contribution to GDP remained stagnant at 10%, but its growth rate declined from 5.6% in 2013, to 3.4% in 2014; the broad money supply grew below the policy target at 19%, as inflation increased from 5.7% in 2013 to 6.9% in 2014; the tourism sector declined by 7.3% from Ksh 94 billion to Ksh 87.1 billion over the same period. This implies that GDP growth is on the downward trend, as it merely expanded by 5.3 percent in 2014, compared to a growth of 5.7 percent in 2013 (KNBS, 2015).

In sum, the set targets of overall GDP growth have remained unattained over the years as depicted in Figure 1.
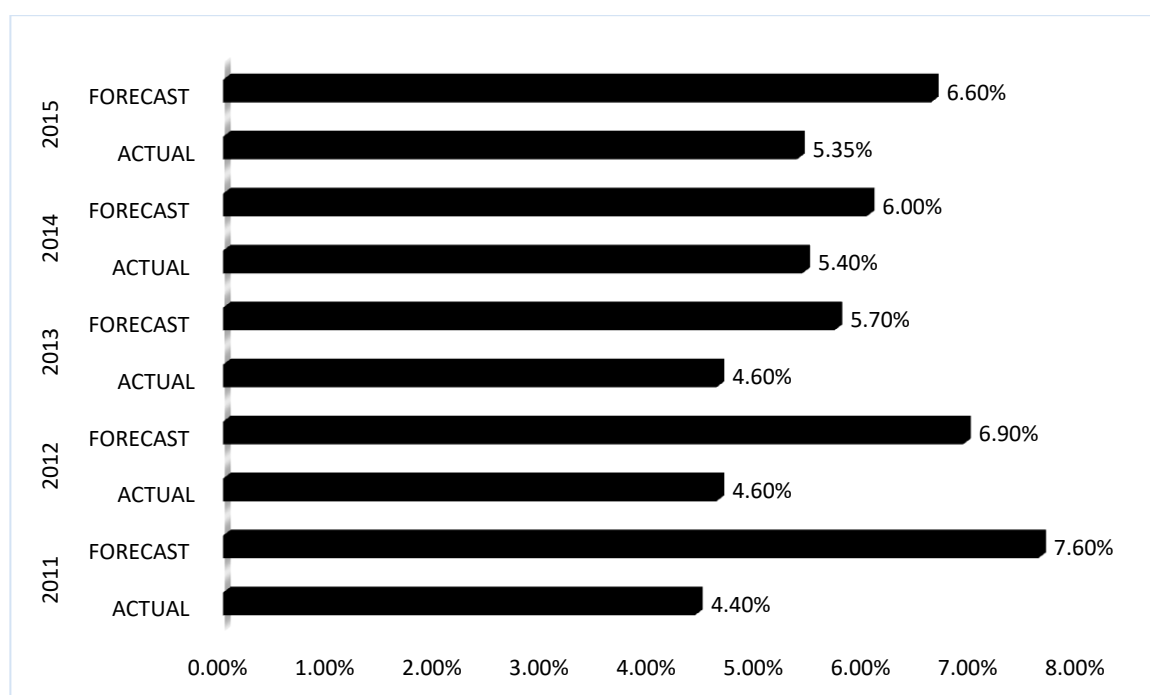

Figure 1: Kenya's GDP Performance against Set Targets

Source: KNBS (2015)

There are questions as to why other sectors with remarkable potential for growing the nation's economy, such as mining and real estate were omitted from the blueprint. For

example the real estate sector registered accelerated growth from 5.8% in 2013 to 13.1% in 2014 (KNBS, 2015).

Kenyan Experiences
The financial services framework in Kenya for instance has failed to instil financial discipline within the sector, necessary to stabilize access to venture funds, control inflationary pressures and financial risk portfolios, and cast a robust financial market. In recent weeks and months, the country has experienced a continued depreciation of the Kenyan shilling versus the major currencies such as the US dollar and the euro. This has been attributed to the near collapse of the tourism sector which accounts for a huge percentage of Kenya's foreign exchange; low productivity in especially the agricultural, mining and manufacturing sectors; rising petroleum products' prices which undermines the prices of other essential commodities; increasing unemployment rates amongst the youth and middle class; a ill savings culture; and unchecked government borrowing to finance budget deficits. If this trend continues unabated, it could lead to a currency financial crisis, which occurs when an assault on the exchange rate of an economy's currency results in a devaluation or sharp depreciation of the currency, or when such attacks compel central banks to expend substantial international reserves or raise interest rates very high in order to defend the currency. If these interventions don't succeed, this can lead to other crisis such as debt crisis, balance of payment crisis, and/or banking crisis (Krugman & Obsfeld, 2009). They found that , when a central bank does not have enough official international reserve assets to maintain a fixed exchange rate, a balance of payments crisis results. Although a government may have enough international reserves under the currency board, a currency crisis can, nevertheless, arise due to a rapid accumulation of that government's foreign debt. Kenya and most African nations have recorded deficit balance of payments since the 1970s, and have continued to borrow to execute the Balance of Payment (BoP) settlements, hence huge accumulated foreign debts.

 The identification of Polak (Bolnick, 2002) with the quantity theory of money has permeated empirical tests of the link between money and economic activity in developing countries. In his application of the Polak model to Nigeria, Gray (1963) concluded that his results support the basic thesis of the model: that change in the money supply induce spending changes which affect income and imports. Schotta (1966) applied Mexican data to two models of economic activity: a 'classical' model and an 'income' model reflecting the now familiar hypothesis that both income and monetary mechanisms are at work in determining expenditure patterns. Thus money supply, employment, expenditure, savings, investments, and exports are intractably intertwined.

The Central Bank of Kenya (CBK) reacted to the Kenya shilling depreciation trend by raising the Central Bank Rate (CBR) from 8.5% to 10%, and then 11% in two consecutive months (Africa Alliance, 2015) . However, the Kenyan economy is yet to respond to this move, as the effects have quickly spread to other East African economies. Although the shilling has been relatively resilient compared to the region's counterparts, it depreciated 13 % to the dollar this year to exchange at the 103 level; as the Uganda shilling weakened by 22.4 % and the Tanzanian currency by 18.6% to the dollar in the period (Africa Alliance, 2015).

Predictable actions by large economies will worsen the delicate currency and financial situation within the region. According to Africa Alliance (2015), China has been on a

structured path to devalue the Yuan in order to export more to the East African markets. They add that weak East African currencies make local and international goods and services expensive. Accordingly, the goal of China is to make its products cheaper and affordable within the region's markets; as only productive and exporting nations can benefits from devalued currencies. They conclude that the USA is slated to raise its interest rates in coming months. High interest rate in the US makes the dollar inaccessible, and obviously stronger relative to other currencies and especially those of the emerging markets, like Kenya and most African colleagues.

One major reason why the move to increase interest rates in Kenya and Africa has not impacted the currency stabilization scheme positively is because this is a weak intervention tool (Krugman & Obstfeld, 2009). They add that high interest rates make the cost of money and access to credit difficult, causing unwanted repercussions to an ailing economy like Kenya's which requires robust investment projects by firms and households. The negative financial trends can destroy an economy.

Unemployment, and underemployment rates in Kenya and most African nations are alarmingly high. For example in Kenya, the unemployment rate is estimated at 40%, translating to approximately 17 million Kenyans; and 70% of those employed are underpaid. The economy gave rise to only 799.7 thousand new jobs, in both the formal and informal sectors in 2014 (KNBS, 2015). According to Adams, Greig, and McQuaid, (2002), these trends are attributable to unplanned training of Human Capital. In Kenya, institutions of higher learning, established to focus on training specialized competencies in the areas of engineering, science, and technology among others, have drifted to offer general courses in humanities and social sciences which are affordable and attract large student numbers, in the quest for quick revenues. For example there is only one university established primarily to train agricultural engineering professionals, but currently houses more students in humanities and social sciences disciplines. Training too many professionals in these areas has led to high rates of unemployment, and underemployment. Furthermore, the few agriculture professionals lack the right mindset and attitudes to transform the sector from the rural areas where land is plenty; as they clamor for white collar jobs in the cities. Accordingly, Kenya is insufficient on well trained workforce in key sectors of the economy such as agriculture, manufacturing, technology, mining, and tourism.

Krugman and Obsfeld (2009) argue that internal balance, describes the macroeconomic goals of producing at potential output or at full employment; or with sustainable and effective use of resources, and of price stability or low inflation.The study found that an unsustainable use of resources or over-employment tends to increase prices and an ineffective use of resources or underemployment tends to decrease prices. A balance is desirable. Internal balance means that an economy enjoys normal output and employment and price stability. The new devolved structure of governance introduced in the new constitutional dispensation of 2010 in Kenya, and seen as the answer to planned educational and other infrastructure development is yet to take form, as it is highly politicized, riddled by corruption, nepotism and other economic malpractices (D'Arcy & Cornell, 2016).

Kenya's imports are larger than exports. This implies a negative international trade balance and has persisted over the years. For example between 2013 and 2104, Imports rose by 14.5 percent to KSh 1,618.3 billion while total exports grew by only 6.9 percent to KSh 537.2 billion during the same period; as trade balance worsened by 18.7 percent from a deficit of

KSh 911.0 billion in 2013 to a deficit of KSh 1,081.1 billion in 2014 (KNBS, 2015). Lack of specialization on its exports agenda, poor infrastructure, and low productivity makes the country's exports insignificant. For example a highly polluted environment due to poor sewerage, drainage infrastructure and waste management systems undermine the processing of Kenya's best produce such as coffee, tea, beef, and fish into final products locally; at a quality acceptable at the international markets. Consequently, most of these items are exported to the developed markets as raw materials, where they are processed into final products, and sold expensively when they finally get back to the Kenyan market shelves.

The investment infrastructure in Kenya, in the form of roads, energy, sewerage and drainage systems, access to credit and venture capital, among others is underdeveloped. Most parts of rural Kenya are inaccessible and hence unable to attract investment projects. This has led to skewed investments in a few major cities and uneven development. Efforts by both the national and county governments to initiate infrastructure projects are hampered by weak procurement laws and corruption. For example, 38% of the respondents, in a survey by research firm Afrobarometer and the University of Nairobi's Institute of Development Studies saw business executives as the main initiators of bribery cases in Kenya today; and the business leaders seen as perpetrators of bribery include chief executives, departmental managers, chief financial officers, board chairs, and executive directors; as the survey also ranks police, top national government bureaucrats, and County officials high up on the graft list (Otuki, 2015).

Kenya's tax revenue, the ultimate source of Government funding and predictor of its fiscal policies is insufficient to fund the country's budget; as the largest non-formal sector whose transactions are mostly off-books is largely out of the tax bracket. Weak tax laws and tax collection enforcement mechanisms create glaring loopholes for big tax payers to evade tax, leading to huge losses in tax revenue. Available data indicate that the amounts of tax revenue lost by the African nations between 1970 and 2010 amounted to 814 billion US dollars; and this amount is twice, the level of development aid given to the continent the same period (Forbes, 2013). They add that the loss is currently estimated at 38 billion US dollars a year according to experts, and it is mainly tax attributed to individuals, SMEs as well as renowned Multinational Corporations.

The macroeconomic fundamentals are interlinked; and government fiscal policies can act as the stopgap (Allen & Barnes, 2016). For example, the negative effects of the financial macroeconomic variable have triggered negative reactions of the other variables to further erode the gains of Kenya's economic growth. Eroded value of the Kenya shilling makes foreign products more expensive relative to domestic ones, hampering exports and imports of essential inputs; escalates the cost of doing business and hence can lead to unemployment; and makes access and cost of credit unattainable, impacting savings and investments by firms and households negatively (African Alliance, 2015). Unemployment causes low productivity, leading to low savings, low investments, low exports, and diminishing foreign exchange reserves (Adams, Greig, & McQuaid, 2002). Low savings and investments by firms and households have the same effects, and so are less exports and weak government intervention mechanisms as has been the case in Kenya. Beck, Levine, and Loayza (2000) used data from 63 countries to assess the impact of financial development on the separate factors contributing to economic growth, including private savings, capital accumulation, and

productivity; and found that the impact of financial intermediation on economic growth occurs mainly through total factor productivity growth, rather than through savings or physical capital accumulation (in isolation). Nicholas (2008) examined the relationship between financial depth and economic growth in Kenya, and found that there is a distinct directional flow from economic growth to financial development, and that economic growth causes savings, while savings drive the development of the financial sector in Kenya.

Alam (1991) examined the relationship between trade orientations and several macro variables, including growth rates of output and exports, and the savings and investment rates; and tested the hypothesis concerning the impact of trade policies and exports growth on changes in total factor productivity, and found that nearly all cross-country studies of the impact of trade policies on growth rates in developing countries have employed export growth rates as proxies for trade policies. This is an important aspect as all nations, and especially developed ones seek to expand and grow markets for their produce at home and abroad. He however concluded that the connection between export growth and trade policies remains unproven.

The World Bank (1987) provided a qualitative evaluation of Trade Orientations (TO) for a fairly large and representative sample of 41 developing countries combining several quantitative and qualitative indicators such as effective rates of protection, export incentives, exchange rates alignments, and direct control; and found that the integration of the macroeconomic variables and negative impacts on economic development can be spiral. For example, financial crises often see exchange rates and asset values stumble, financial institutions fail, undulation impacts slip into other business sectors, leading to substantial economic disarticulation. At the time of this writing, a huge bank in Kenya has been put under statutory management, risking approximately Kenya Shillings 580 billion of savers funds.

This paper investigates whether the weak GDP performance is attributed to the mismatch of the macroeconomic variables with key sectors; and the extent of the mismatch.

Why Kenya is an Ideal Case Study
Kenya is an ideal case study to infer on the African economic experiences. Kenya is the economic hub of the East African region and in many aspects Africa as a whole. This is due to the country's central location; the well-developed port of Mombasa; a fairly robust education system and rich educated middle class ready to take up challenging roles; functional financial markets, and especially banks, insurance entities, and the automated Nairobi Stock Exchange (NSE); the homely culture of its people; and a stout new constitution with unprecedented human rights freedoms and corporate governance policies. These virtues have made Kenya attract trade dealings with most African Nations. Globalization and regional economic integration bodies such as the East African Community (EAC); Common Market for Eastern and Southern Africa (COMESA); Intergovernmental Authority on Development (IGAD); and the African Economic Community (AEC) which brings African states to a common trading platform, have gradually eliminated international trade barriers. Consequently, international financial markets, as well as markets for commodities and services can mutually influence each other, as illustrated by the Kenya's financial crisis that occurred between 1986 and 1989, 1993and 1994, and 1998, and left many banking

institutions, and almost the entire Kenyan economic system on its knees, with similar consequences within the East African regional trading block.

Robust Information Systems Technology (ICT) has made market exchanges fairly easy. For example, the Kenya's NSE trades on the Automated Trading System (ATS) since 2009; the Uganda Stock exchange (USE) trades on the Settlement and Clearing Depository electronic trading system since 2010; and the Tanzania Stock Exchange (TSE) has operationalized the use of mobile technology platform on buying and selling shares and bonds(Nyasha & Odhiambo, 2014). Smaller states like Rwanda have been allowed to use the East African Commodity Exchange (EAX) IT platform, which uses the NASDAQ infrastructure (East Africa Exchange, 2018). The South Africa's Johannesburg Stock exchange (JSE) and the largest in Africa is an electronic multi-asset class platform offering trading, clearing and settlement of cash equities, equity and agricultural derivatives and interest-rate products. Mobile transactions, Africa's financial ingenuity are seen as the basis of Africa's markets' integration (Irving, 2005).

What would Kenya do to champion a sustained economic development agenda which is anticipated in its economic blueprint, the vision 2030? Does it matter whether or not macroeconomic fundamentals are carefully aligned with key sectors that impel maximum economic prosperity? Should this be the concerted effort of regulators, and financial market players working together to unravel home-grown solutions; and especially because Kenya's macroeconomic fundamentals are largely built on colonial ideology and philosophy owing to weak research at home? Is this a weakness in Kenya, and does this undermine the search of home-grown solutions to address Kenya's economic challenges? Furthermore, although African governments have various economic and business integration forums, have they succeeded in building strategic partnerships to aid the alignment of macroeconomic fundamentals with key business sectors with maximum impact on economic development? For example African nations merely sell to their trading partners' deficient supplies in the absence of specialized strategic trade. Besides, trade tariffs and barriers abound under heavy political manoeuvres.

The extent of the macroeconomic variables mismatch and their impact on Kenya's economic prowess needs attention. This work aims at establishing:

i)   The influence of the five macroeconomic fundamentals on Kenya's GDP growth;

ii) The extent of the mismatch of the macroeconomic fundamentals with key sectors contributing to Kenya's GDP growth; and

iii) The impact of the mismatch of the macroeconomic fundamentals on Kenya's GDP growth.

Theoretical Background
The study was underpinned on two economic theories of monetarist and the neoclassical synthesis.

The Monetarist Theory
This theory is founded on the premise that money and the central banking system play a pivotal role in influencing the macroeconomic fundamentals which in turn impel nations' economic productivity (Bordo & Schwartz, 1979). Tegene (1989) applied the monetarist

theory to study its effect on money value in six Africa countries and found that the model adequately explained the financial impact on the macroeconomics of the countries examined. He observed that in each case, the postulated variables explained a large proportion of the variation in money and its effect on GDP growth. Most Monetarists advocate a money growth rule to limit central bank discretion and to curb arbitrary political influence or negative fiscal policies on the central bank which hinder economic prosperity of nations (Wells & Gootzeit, 1984). They add that financial growth improves savings and investments, which in turn reduces unemployment, leading to GDP growth. One way of enhancing money growth is improved exports (Kumar, Seema, Chand & Arti, 2007). In tandem with the monetarist theory: this study focused on the influence of the five macroeconomic fundamentals of finance, exports, unemployment, savings & investments, as well as government fiscal policies on Kenya's GDP growth. Furthermore, their impact, and extent of the mismatch with key sectors driving the country's GDP growth were studied. However the theory has been discredited for not focusing on the channels through which the increase in money neither operates, nor the impacts on individual sectors (Wells & Gootzeit, 1984).

The Neoclassical Synthesis Theory
The neoclassical synthesis theory is considered the mainstream economic perspectives and captures the inherent relationships between investments and savings by households, businesses, as well as the government in a whole economic system on the one hand; and the relative liquidity in the overall monetary chain, unemployment, and their consequent impact on a country's GDP growth (Stanfield, 1979). He adds that the theory affirms how appropriate monetary and fiscal policies can ensure an economic environment or infrastructure which will validate the verities of macroeconomics, while combining the essentials of aggregate income determination in a well-running system, with high-employment assumption. Neoclassical synthesis is a theory in which methodological, intentionally rational optimization of resource by agents (household, firms, and states) is the overriding factor in the pursuit of the exploitation of the benefits from trade, which presupposes a willingness to respond to macroeconomic fundamentals for growth (Pitelis, 1992). The macroeconomic fundamentals which are dominant in mainstream economics, as well as their influence on GDP growth, the key indicator of Kenya's prosperity were the subject of this study.

Literature Review
Mismatch of macroeconomic fundamentals with key sectors contributing to economic development impacts negatively on a country's economic development; and the greater is the mismatch, the greater is the impact. Currency mismatch is a vehicle that exposes the economy to systemic risk. Ranciere, Tornell, and Vamvakidis (2010) define it as the extent to which an economy's liabilities are denominated in foreign currency while its assets are denominated in domestic currency. This implies that for Kenya and Africa whose currencies are weak, they own less than they owe. Systemic or market risks may not be cured unless economies invoke strategic interventions by regulators and market players to stabilize money markets while encouraging competitive flow of funds to the country's key sectors contributing the most to economic development. For example, the US has institutions such as Ginnie Mae and Federal Home Loan banks, whose securities/assets are backed by the full faith and credit of the US government and hence the going concern postulate aspect of firms and households is guaranteed. In Kenya, such entities; for example the Industrial

Development Bank (IDB) and the Agricultural Finance Corporation (AFC) are largely inactive, and they lack sufficient funds to provide credit and venture capital money. Such is the mismatch of funds with key sectors in Kenya. Ranciere, Tornell, and Vamvakidis (2010) argue that if one looks exclusively into the banks' balance sheets, the notional degree of currency mismatch is often small, as the banks with foreign currency liabilities also tend to lend in foreign currency. However, there is de facto currency mismatch if banks' debtors cannot hedge their exchange rate risk in the form of credit default risk. Kenyan banks are unable to match their foreign currency denominated liabilities by lending in foreign currency due to inadequate demand of foreign loans as majority of foreign investors employ hard currencies. Hedging products are also inadequate; as the only derivative market in operation in Kenya is the futures market which has just began small-scale operations on selected financial asset classes. This study sought to establish the extent of the mismatch of macroeconomic fundamentals with key sectors which drive GDP Growth in Kenya.

Dore (1994) suggest that it is rare to find anything written by an economist on employment these days which does not end with the pious declaration that, the only long-term solution to our problems is to improve our education and training. L'Horty and Rault (2003) investigated the reasons for the high equilibrium unemployment in France, and found that, the equilibrium unemployment increase in France reflects the slowing down of productivity gains, the increase of social and fiscal wedges; the deterioration in job security and in more marginal way, the terms of exchange increase and the skill mismatch. Voom and Miller (2005) argue that the recent literature on overeducation and undereducation suggests that there is a reference level of education for each occupation, being the level required for adequate job performance; and concluded that workers whose educational attainment exceeds this reference level are termed overeducated; whereas workers whose education attainment falls short of the reference level are termed undereducated. This is a huge problem in Kenya, as skewed education aggravates the aspect of overeducation in most occupations, further complicated the productivity mismatch and unemployment. Adams, Greig, and McQuaid (2002) found that while supply-side policies such as skills training and incentives to reduce welfare dependence remain important, these will be more effective if implemented in conjunction with complementary demand side policies such as employer requirement specifications and recruitment practices. The demand side practices in Kenya are undermined by corruption and nepotism.

Banerjee and Newman (1993) opine that there are several ways in which the dynamics of occupational choice influence the process of development. They further argue that the process of development also affects the structure of occupations, as it alters the demand for and supply of different types of labor and, hence, the returns to and allocation of occupations. Because of capital and market imperfections, people can borrow only limited amounts, and as a result, occupations that require high levels of investments are beyond reach to poor people, who choose instead to work for other, wealthier, employer (Banerjee & Newman, 1993). In Kenya, development is low in technical areas, and most households are poor; diminishing demand for occupations in some sectors that impel economic prosperity. Banerjee and Newman (1993) concluded that insofar as occupational distribution can affect savings, investment, risk bearing, fertility, and the composition of demand and production, there is a clear link with the economy's rate of growth and hence with development. Unemployment was a key informant of this study. Banerjee and Newman (1993) opine that there are several

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Cline (2001) posts that the most important generic change in trade policy in the US in the 1980s was the more toward aggressive reciprocity, where demand for a level playing field ostensibly sought to reject negative measures of new imports protection in favour of positive action to increase US exports. Berk (1999) suggests that while the Federal Reserve controls several nominal interest rates, the real economy is affected by real rates, that is, rates adjusted for inflation; and found that Treasury Inflation-Indexed Securities (TIIS) adjust their principal and interest for inflation, giving a direct measure of real rates, which influence investments by firms and households. It is doubtful that Kenya's and African Central Banks have made efforts to accurately estimate real interest rates, as inflation has not been correctly forecast. Banks take advantage of these loopholes and continue to charge exorbitant interest rates as in Kenya they were only required to declare the annual percentage rates in 2014; and majority have not complied. Jalilian and Kirkpatrick (2005) found that there is a large body of theoretical and empirical literature to support the proposition that an efficient, well-functioning financial system is a necessary condition for long-term economic growth. Schumpeter (1911) argued that financial intermediation through the banking system played a pivotal role in economic development by affecting the allocation of savings and, thereby improving productivity, technical change and economic growth. Modern financial theory emphasis the intermediation role performed by financial institutions in bridging the information asymmetries between borrowers and savers, thereby performing the functions of savings, mobilization, capital fund allocation, monitoring of the use of funds, and managing risk, which together support the economic growth process (Levine, 1997). Higher levels of financial development are significantly and robustly correlated with faster current and future rates of economic growth, physical capital accumulation, and economic efficiency improvements; and finance does not only follow growth, finance seems importantly to lead to economic growth (King & Levine, 1993). Where there are significant imperfections in the financial market, resulting, for example, from asymmetric information, then the contribution which the financial sector makes to economic growth is impaired (Stiglitz, 2000). The impact of market imperfections will be compounded by a weak financial regulatory and supervisory framework (Brownbridge & Kirkpatrick, 2002). These problems are often pronounced in low-income countries, where institutional capacity and regulatory skills are limited, and where political pressure to induce regulatory forbearance further weakens the effectiveness of the regulation process (Jalilian, Kirkpatrick, & Parker, 2003). Exports was one of the macroeconomic fundamentals under investigation in this study.

Santonu and Sushanta (2008) argue that the decline in poverty and a higher growth rate that took place in India during the late 1970s and 1980s were largely a result of government anti-poverty measures teamed with the more equitable distribution of credit and inputs to smaller and marginal farmers. Kumar, Seema, Chand and Arti (2007) explain the export-led growth hypothesis for Fiji and Papua New Guinea which were facing dismal economic growth performances over the last couple of decades just like Kenya; and found sufficient evidence in support of export-led economic growth in the long-run in Fiji, and in the short-run in Papua New Guinea. Government policies were the subject of investigation in this study.

Black and Carnes (2006) sought to judge how accounting systems and macroeconomic distinctions in the Asian-Pacific region affect earnings predictability. This is essential because if firms, household, researchers, and governments can predict earnings and thus the sectors responsible, they can chart the course for economic prosperity by aligning macroeconomic fundamentals with the sectors. Mande (1996) found no difference between Japanese and US analysts in forecasting earnings, though Japanese analysts do a better job of forecasting sales. This may explain why the Japanese economy has grown overtime. Allen, Cho and Jung (1997) examined forecasts from 1989 through 1991 for eight Pacific Basin capital markets and the United States and found that forecast errors are larger in the less established markets of Taiwan, the Philippines, and Thailand. Economic growth and prosperity has been low in countries with larger forecast errors like Kenya, as they are unable to spot key economic drivers which require supplementary alignment. Black and Carnes (2006) found that the overall measure of the Global Competitiveness Index is correlated with the size of forecast errors, indicating that analysts are more accurate in the more competitive nations. This overall Competitiveness Index is an index of economic indicators that have proven to be correlated with medium to long term economic growth (Schwab, Smadja, Levison, Erskine, & Gunsbourg (1999). This study sought to link macroeconomic fundamentals and Kenya's GDP forecast.

Methodology

The study presented in this paper focused on financial sector regulators, and Commercial banks located within Nairobi, Kenya's capital. A null hypothesis: $H_0=0$, with $k=5$ was that, the mismatch of the five macroeconomic fundamentals has no significant positive impact on GDP growth in Kenya. The level of significance was 0.1, and t was the test statistic. Simple regression analysis was employed to compare the macroeconomic fundamentals with GDP growth, the ultimate measure of a country's economic performance or productivity. The sample size was 35, and therefore the degree of freedom was 29 [35-(5+1)]. Accordingly, the H_0 would be rejected if the mean (t value) was less than -1.699 or greater than 1.699.

The study employed quantitative research design using a self-administered questionnaire. The target population consisted of 47 managers drawn as follows: 5 CEOs in the five regulatory bodies and 42 business managers in the Kenya's 42 commercial banks, all operating within Nairobi, Kenya's capital. These mangers analyse, make decisions, and implement macroeconomic variables impacts on GDP growth. Stratified random sampling technique was employed to select a sample of 35 managers out of the target population strata as follows: a census of the 5 CEOs from the regulators, and 30 business managers from the commercial banks using the Yamane (1967) formula. Simple random sampling was employed to select the sample in each case. The study was undertaken using a survey conducted through the

administration of questionnaires using the mixed method approach. Validation of the questionnaires was carried out to guarantee its efficacy. The Statistical Package for the Social Sciences (SPSS) version 20.0 was used in the data analysis and presentation of findings.

Data and Findings
Descriptive Analysis
Descriptive statistics of the hypothesis and the control variable (GDP growth) are presented in this section.

Influence of the Five Macroeconomic Fundamentals on Kenya's GDP Growth
Figure 2 shows influence of macroeconomic fundamentals on Kenya's GDP growth from the perspective of commercial bank business managers.
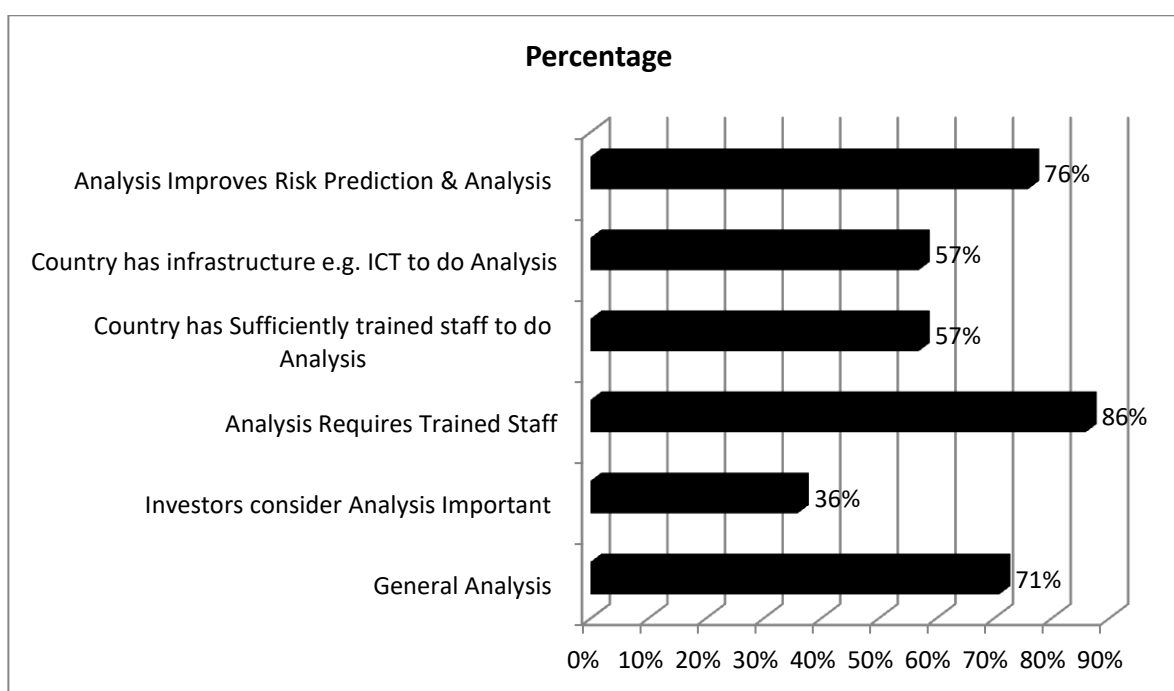

Percentage

Analysis Improves Risk Prediction & Analysis	76%
Country has infrastructure e.g. ICT to do Analysis	57%
Country has Sufficiently trained staff to do Analysis	57%
Analysis Requires Trained Staff	86%
Investors consider Analysis Important	36%
General Analysis	71%

0% 10% 20% 30% 40% 50% 60% 70% 80% 90%

Figure 2: Influence of Macroeconomic Fundamentals on Kenya's GDP Growth: Commercial Bank Business Managers' Perspective

Source: Field Data (2018)

Seventy six percent of the respondents indicated that the analysis of macroeconomic fundamentals data trends is important in managing their own business risks, as well as predicting and improving economic performance in Kenya. Fifty seven percent believe that Kenya has the necessary ICT tools to accurately analyse and align the macroeconomic fundamentals with key sectors contributing the most to the country's GDP growth. Fifty seven percent indicated that Kenya has sufficiently trained staff to execute the process; as 86% believe that the process requires well trained Human Capital (HC). Only 36% believe that investors consider macroeconomic fundamentals essential before they can pitch their businesses.

Figure 3 shows influence of macroeconomic fundamentals on Kenya's GDP growth from the regulators and CEOs perspectives.
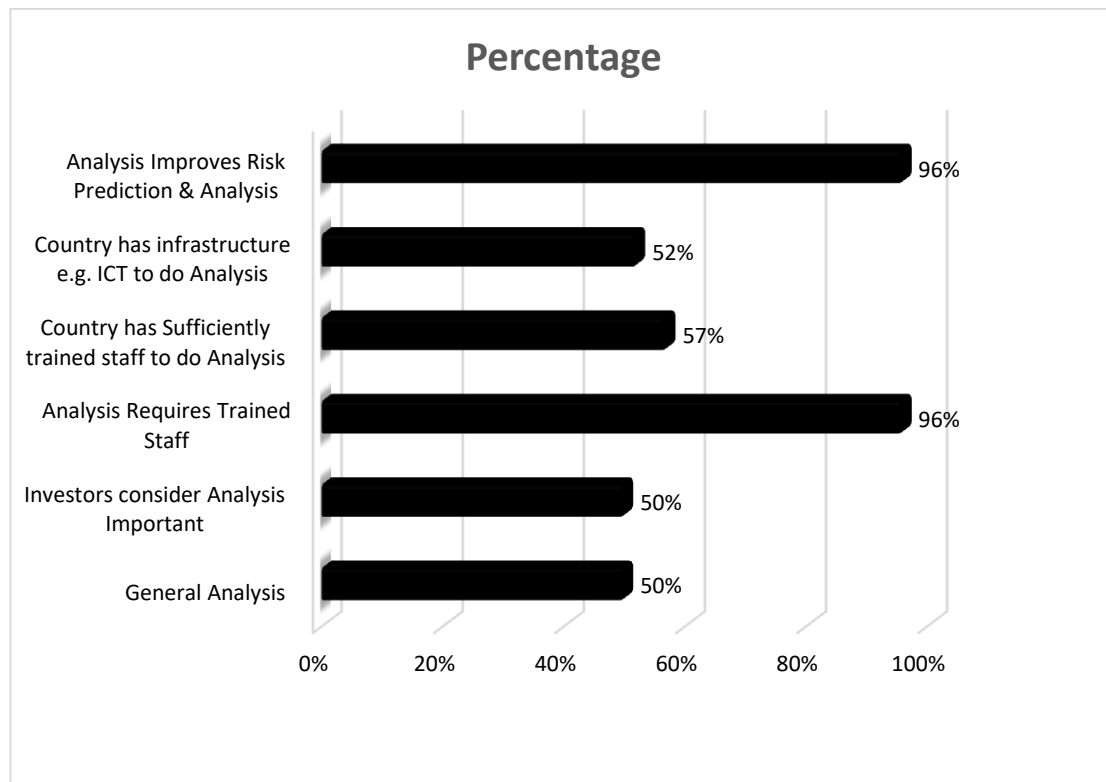
**Figure 3: Influence of Macroeconomic Fundamentals on Kenya's GDP Growth:
Regulators' perspective**

Source: Field Data (2018)

Ninety six percent of the respondents indicated that the analysis of macroeconomic fundamentals data trends is important in managing their own business risks, as well as predicting and improving economic performance in Kenya. Fifty two percent believe that Kenya has the necessary ICT tools to accurately analyse and align the macroeconomic fundamentals with key sectors contributing the most to the country's GDP growth. Fifty seven percent indicated that Kenya has sufficiently trained staff to execute the process, as 96% believe that the process requires well trained HC. Fifty percent promoted that investors undertake macroeconomic variables analysis to inform their business ventures.

Extent of the Mismatch of the Macroeconomic Fundamentals with Key Sectors Contributing to Kenya's GDP Growth
Figure 4 shows the extent of the mismatch of the macroeconomic fundamentals with key sectors contributing the most to Kenya's GDP growth from the commercial bank managers' perspective.
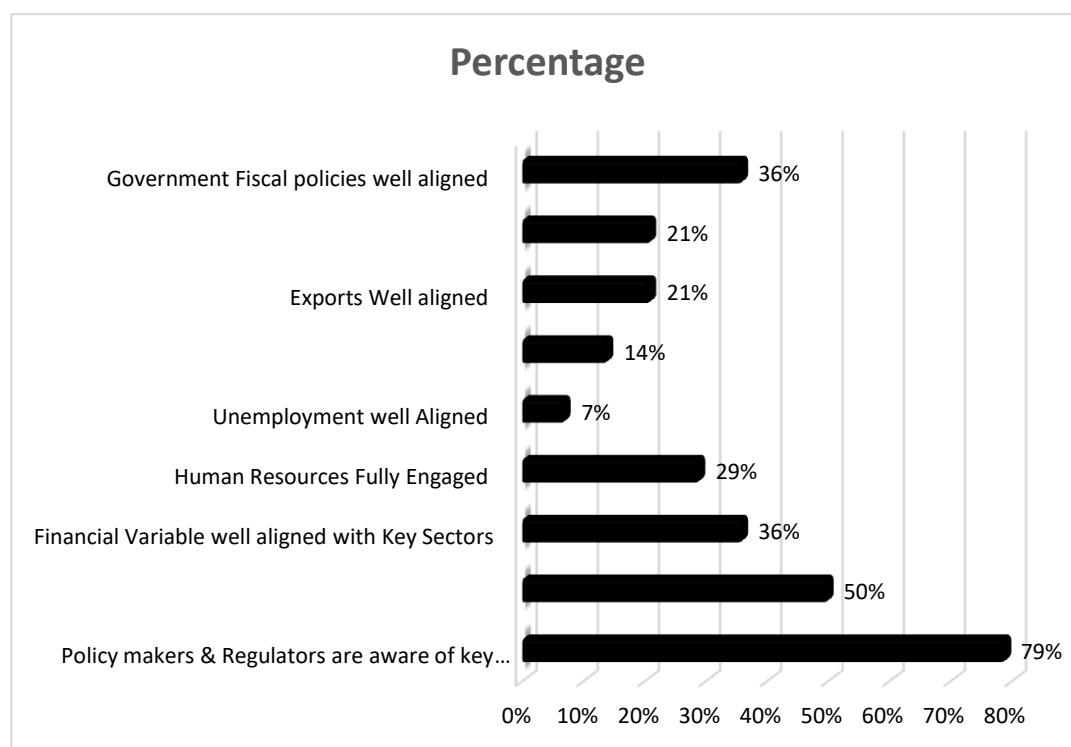
Figure 4: Extent of Macroeconomic Fundamentals Mismatch with Key Sectors Contributing to Kenya's GDP Growth: Commercial Bank Managers' Perspective

Source: Field Data (2018)

The macroeconomic fundamentals are mismatched with key sectors driving Kenya's economic development to a significant extent. For example, only 36% of the respondents felt that the finance macroeconomic variables is well matched; 7% felt that unemployment is well matched, with only 29% indicating that Kenya's Human Capital (HC) is fully engaged, while a mere 14 % felt that Kenya's institutions of higher learning are well balanced and equipped to train on the essential skills required in key sectors driving economic development. Twenty one percent of the respondents indicated that the exports macroeconomic variable is well matched, and the same percentage promoted that savings and investments by firms and households is well matched. Only thirty six percent opined that government policies have been implemented to align the fundamentals with key sectors contributing to Kenya's GDP growth; and yet 79% of the respondents believe that the regulators and police makers are well aware of the Kenya's sectors contributing the most to the country's economic development. Fifty percent believe that investors are aware of the key sectors driving GDP growth in Kenya.

Figure 5 shows the extent of the mismatch of the macroeconomic fundamentals with key sectors contributing the most to Kenya's GDP growth from the regulators and CEOs perspectives.
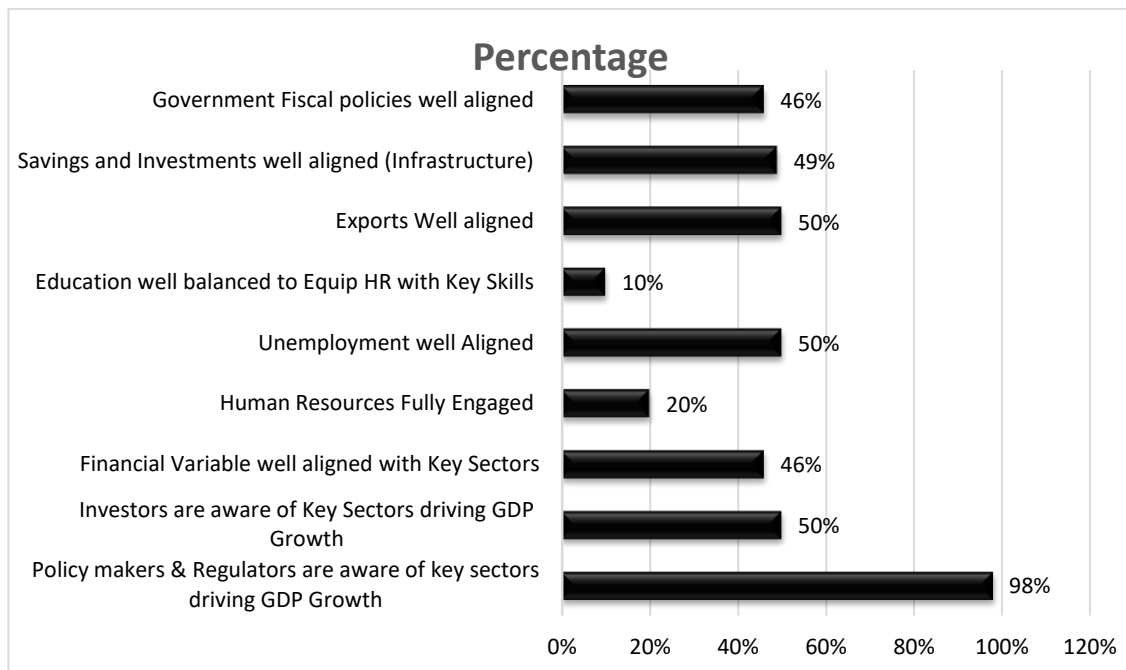
Figure 5: Extent of Macroeconomic Fundamentals Mismatch with Key Sectors Contributing to Kenya's GDP Growth: Regulators and CEOs Perspective

Source: Field Data (2018)

Forty six percent of the respondents felt that the finance macroeconomic variables is well matched; 50% felt that unemployment is well matched, with only 20% indicating that Kenya's Human Capital (HC) is fully engaged, while only 10 % felt that Kenya's institutions of higher learning are well equipped to train on the essential skills required in key sectors driving economic development. Fifty percent of the respondents indicated that the exports macroeconomic variable is well matched, while 49% opined that savings and investments by firms and households is well matched. Forty six percent opined that government policies have been implemented to align the fundamentals with key sectors contributing to Kenya's GDP growth. Ninety eight percent of the respondents believe that the regulators and police makers are well aware of the Kenya's sectors contributing the most to the country's economic development, while 50% believe that investors are aware of the key sectors driving GDP growth in Kenya.

Impact of the Mismatch of the Macroeconomic Fundamentals on Kenya's GDP Growth
Figure 6 shows the impact of the mismatch of the macroeconomic fundamentals on Kenya's GDP growth based on the commercial bank business managers' perspectives. Mismatch of the macroeconomic fundamentals hampers GDP growth in Kenya. Fifty seven, 64%, and 64% of the respondents indicated that finance, unemployment, as well as savings and investments by firms and households variables mismatch have high impact on Kenya's GDP performance respectively. Seventy one percent believe that the exports and government policies have high impact on Kenya's economic growth.
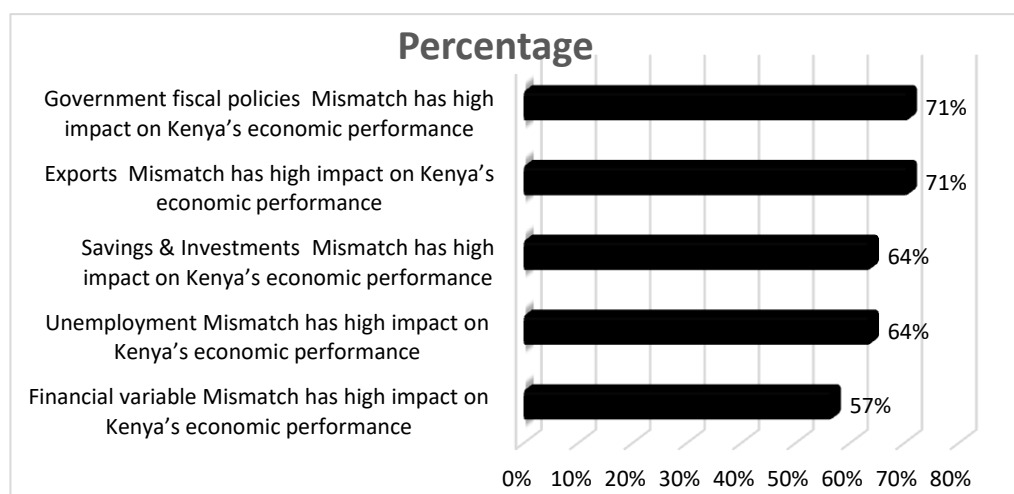
Figure 6: Impact of Mismatch of the Macroeconomic Fundamentals on Kenya's GDP Growth: Commercial Bank Managers' Perspective

Source: Field Data (2018)

Figure 7 shows the impact of the mismatch of the macroeconomic fundamentals on Kenya's GDP growth in the perspective of regulators and CEOs.

Figure 7: Impact of Mismatch of the Macroeconomic Fundamentals on Kenya's GDP Growth: Regulators CEOs Perspective

Source: Field Data (2018)

Ninety eight percent, 73%, and 75% of the respondents indicated that finance, unemployment, as well as savings and investments by firms and households variables mismatch have high impact on Kenya's GDP performance respectively. Seventy one percent

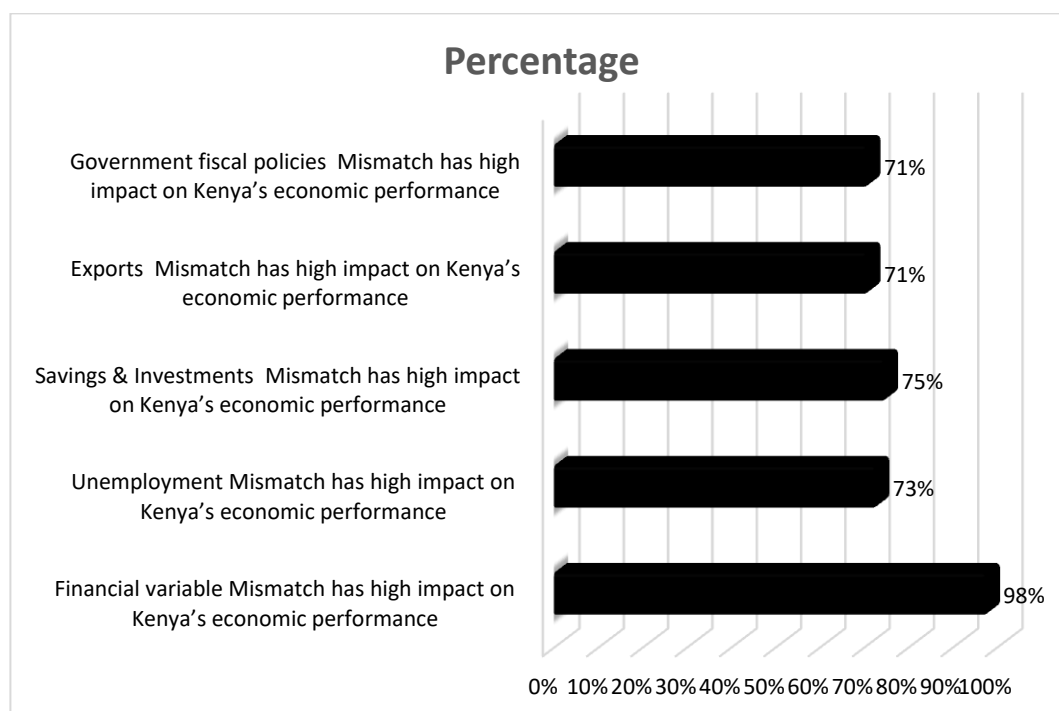believe that the exports and government policies have high impact on Kenya's economic growth.

Correlation Test and Regression Analysis
Correlation Test
Correlation analysis was performed on the relationship between the predictor and response variables and the results presented in Table 1.

Table 1: Correlation analysis

		Y	X_1	X_2	X_3
	Pearson Correlation	1			
Y	Sig. (2-tailed)				
	N	35			
	Pearson Correlation	.478**	1		
X_1	Sig. (2-tailed)	.002			
	N	35	35		
	Pearson Correlation	.744**	.759**	1	
X_2	Sig. (2-tailed)	.000	.000		
	N	35	35	35	
	Pearson Correlation	.757**	.602**	.661**	1
X_3	Sig. (2-tailed)	.000	.000	.000	
	N	35	35	35	35

**. Correlation is significant at the 0.01 level (2-tailed).

Where **Y** = Kenya's GDP growth, X_1 = influence of the five macroeconomic fundamentals on Kenya's GDP growth, X_2 = extent of the mismatch of the macroeconomic fundamentals with key sectors contributing to GDP growth, X_3 = impact of the mismatch of the macroeconomic fundamentals on Kenya's GDP growth.

The results in Table 1 shows that there is a positive significant linear relationship between Kenya's GDP growth and: the five macroeconomic fundamentals, $r = 0.478$; $p = 0.002$, extent of mismatch of the macroeconomic fundamentals with key sectors, $r = 0.744$; $p = 0.0001$, and the impact of the mismatch with, $r = 0.757$; $p = 0.0001$. This was indicated by significant p-values less than 0.05 at 95% confidence level.

Regression Analysis
A linear regression analysis was performed on the response and explanatory variables and the results presented in Tables 2, 3 and 4. Table 2 shows a model summary used to test the goodness of fit.

Table 2: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
	.850[a]	.722	.699	.20993

The results in Table 2 shows that the independent variables explained 69.9% of the change in the Kenya's GDP growth as indicated by a coefficient of determination (R^2) value of 0.699.

An ANOVA was also performed to test for the significance of the whole model and results presented in Table 3.

Table 3: ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	4.124	3	1.375	26.86	.000
Residual	1.587	31	.0512		
Total	5.711	34			

The results in Table 3 revealed that the model significantly predicted Kenya's GDP growth with $F=26.86$; $p=$ <0.0001. Table 4 shows the model coefficients.

Table 4: Model Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.234	.349		3.530	.001
X_1	.266	.111	.329	2.386	.022
X_2	.607	.138	.643	4.383	.000
X_3	.452	.102	.530	4.432	.000

a. Dependent Variable: Y

Where **Y** = Kenya's GDP growth, X_1 = influence of the five macroeconomic fundamentals on GDP growth, X_2 = extent of the mismatch of the macroeconomic fundamentals with key sectors contributing to GDP growth, X_3 = impact of the mismatch of the macroeconomic fundamentals on GDP growth. The results in Table 4 revealed that the explanatory variables predicted Kenya's GDP growth at 5% level of significance. This was indicated by a significant p-value ($p=$ 0.022, <0.0001 and <0.0001 respectively).

Discussion

Most respondents believe that the five macroeconomic fundamentals are the key drivers of the country's GDP growth and their misalignment hampers the country's economic development, as measured by GDP growth. Furthermore, Kenya has trained HC to undertake the analysis and consequent alignment of the fundamentals with the key sectors contributing the most to the country's GDP growth. However, empirical findings indicate that investors do not consider the fundamentals analysis essential. Only 36% of the commercial banks business managers opined that investors consider analysis necessary. This implies that investors invest in unfavourable conditions and this explains the country's poor GDP performance.

According to commercial bank business managers, the unemployment variable was the most unmatched with key sectors contributing to GDP growth. This may be attributed to the fact that bank mangers in Kenya employ graduates from all disciplines. Unmatched HC leads to poor economic productivity as has been the case in Kenya. However, regulators CEOs considered both the financial and government fiscal policies as the most unmatched with key sectors which drive economic prosperity in Kenya. This explains why most Small and Medium Enterprises (SMEs) as well as the non-formal sectors operators who are the key

players in Kenya's GDP growth have no access to capital funds. A key observation by all respondents is that the Kenya's education sector does not equip the country's HC capital with requisite skills to meet industry needs. These findings support the findings by Ranciere, Tornell, and Vamvakidis (2010), who studied especially the effects of currency mismatch on GDP growth.

All five fundamentals have high impact on Kenya's GDP growth. According to the regulators, the finance variable had the greatest impact. This may be explained by the fact that the interbank market is the largest, as well as the basis for all other fiscal markets in Kenya. In addition, Kenya has experienced robust financial deepening due to the mobile finance growth. However, commercial bank managers considered government policies and exports to have the greatest impact on the country's GDP growth. This implies that these require more attention in order for Kenya to experience target GDP growth. This is in tandem with the fact that government policies can be a stopgap, in aligning other variables. For example, the government, working with the regulators and financial markets players, can infuse the desired discipline in an entire economic system by enacting robust laws and training and engaging skilled HC in key positions to implement them; based on best practices. This would ensure that all the fundamentals are well aligned with key sectors already identified in the country's economic growth blueprint, the vision 2030. Studies, by L'Horty and Rault (2003), Voom and Miller (2005), Adams, Greig, and McQuaid (2002) as well Banerjee and Newman (1993) support the research findings as unemployment impacts GDP growth negatively. Other studies, for example Berk (1999) and Jalilian and Kirkpatrick (2005) support the negative impact of poor fiscal policies on GDP growth, per the findings of this study. Stiglitz (2000) as well as Brownbridge and Kirkpatrick (2002) attributed poor GDP growth to weak monetary systems, in support of the research empirical evidence.

Conclusion
Overall, the *t* value was greater than 1.699 in each case, and hence the null hypothesis was rejected at 0.1 level of significance, while the alternative hypothesis supported. This implies that the five macroeconomic fundamentals have a statistically significant positive relationship with the country's GDP growth; and that the variables are significantly mismatched with key sectors which contribute the most to GDP growth; hence significantly negatively impacting on Kenya's GDP growth. This explains why Kenya's GDP forecast in the past five years is unachieved.

Based on empirical findings, Kenya has well trained professionals, and the necessary ICT tools to analyse and align macroeconomic variables with key sectors contributing to the nation's economic intensification by invoking strategic interventions. However, a weak financial regulatory framework makes the practice unfeasible. The CBK in partnership with commercial banks should execute polices that stabilize the Kenya shilling and ensure the availability of development funds to especially SMEs and non-formal economy players, as key drivers of the country's economic productivity. Furthermore, the country should restructure and equip its education system in order to train on essential skills that enhance the quality of full employment and GDP growth, while minimizing overeducation and unemployment. Exports should be expanded in areas of the country's absolute or comparative advantage; for example coffee, tea, fish, and beef processing, as well as tourism and flower framing. Kenyan tea and coffee for example are known to infuse high taste in other brands.

Infrastructure development should be focused on the key sectors which impel GDP growth in Kenya, in order to attract investments by firms and households.

Limitations

The study focused on five macroeconomic fundamentals. There are other macroeconomic fundamentals which affect Kenya's GDP growth. Furthermore data was collected from 5 CEOs and 43 business managers from the regulatory bodies and Kenyan commercial banks respectively, located in Nairobi. Managers in other Counties in Kenya could offer further research insights.

Recommendations for Further Research

Further research is recommended with other macroeconomic fundamentals and a population covering the country's 47 counties.

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