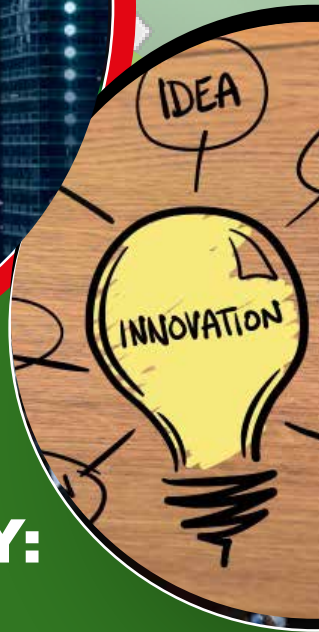


Policy Monitor

Thinking Policy Together

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**BUILDING BACK FOR RECOVERY:
FOCUS ON SMART CITIES,
INNOVATION, AND SUSTAINABLE
FOOD SYSTEMS**

POLICY *Monitor*

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To provide quality public policy advice to the Government of Kenya by conducting objective research and analysis and through capacity building in order to contribute to the achievement of national development goals

Contents

4 Recent Economic Developments

11 Fostering Innovation to Build Resilience in the Economy

15 Building Sustainable Smart Cities to Endure COVID-19 and Future Shocks



19 Developing Resilient and Sustainable Food Systems in the COVID-19 Era and Beyond

22 The Role of Technological Advancement in Improving the Performance of Kenya's Floriculture Industry

33 KIPPRA News

Editorial

Welcome to the KIPPRA Policy Monitor, the January-March, 2021 edition. The theme of this edition is “Building Back for Recovery: Focus on Smart Cities, Innovation, and Sustainable Food Systems”. The edition focusses on four articles, that is: Fostering innovation to build resilience in the economy; Building sustainable smart cities to endure COVID-19 and future shocks; Developing resilient and sustainable food systems in the COVID-19 era and beyond; and The role of technological advancement in improving the performance of Kenya’s floriculture industry. Moreover, the Policy Monitor highlights recent economic developments and forecasts, which show that economic growth and employment continue to be affected by the COVID-19 pandemic.

Additionally, this edition covers various activities and events undertaken by the Institute during the third quarter. The key highlights include the Virtual Launch of 2020 Global Go to Think Tank Index Report; KIPPRA Mentorship Programme for Universities (KMPUs) events at Kisii university and University of Nairobi; a roundtable breakfast meeting to discuss the implications of Africa Continental Free Trade Area (AfCFTA); a virtual policy seminar on

intellectual property and micro, small and medium enterprises (MSMEs): taking your ideas to the market; and the long-awaited KIPPRA Day.

Finally, the Policy Monitor provides key highlights of policy news at domestic and regional levels; and legislative developments at the National Assembly and concludes with upcoming events.

On behalf of the KIPPRA family, we hope you will be enlightened as you read this third edition.

Recent Economic Developments

image: Freepik.com

By Hellen Chemnyongoi, James Ochieng', Daniel Omanyo and Benson Kiriga

This article analyzes the country's recent economic developments with a focus on four key areas: the growth of economic activities, monetary and financial policy, fiscal developments and the external sector.

Growth of Economic Activities

The economy in the third quarter of 2020 contracted by 1.1 per cent. The contraction was lower than that of the second quarter at 5.5 per cent, signifying some recovery from the pandemic. Sectors such as agriculture, construction, exports, manufacturing, and education supported the recovery of economic performance. According to the January 2021 Central Bank of Kenya MPC Private Sector Market Perceptions Survey, the reopening of stalled business operations coupled with the Economic Stimulus Programme support were some of the reasons people have a positive outlook of the economy in the fourth quarter. The recommencement of economic activities is expected to lead to an increased re-engagement of employees.

The hospitality and accommodation sector witnessed enhanced economic activity as 97 per cent of hotels participating in the CBKs Survey of hotels and flower farms reported to be in operation. Average bed occupancy improved to 26 per cent in February 2021 compared to December 2020. Participating flower farms have fully resumed business operation, and flower exports were close to pre-COVID-19 levels. The agricultural sector continued to enjoy good weather conditions, and continued expansion in quarter three. There are positive prospects for the economy mainly due to the return of business confidence and the resumption of international travel.

The volume of horticulture exports grew by 27.7 per cent in 2020. This was attributed to the resumption of demand in the international markets and the availability of adequate cargo space. Tourism also improved, with the total number of visitors arriving through Jomo Kenyatta International Airport in Nairobi and Moi International Airport in Mombasa increasing from 31,875 persons in November 2020 to 47,406 persons in December 2020.

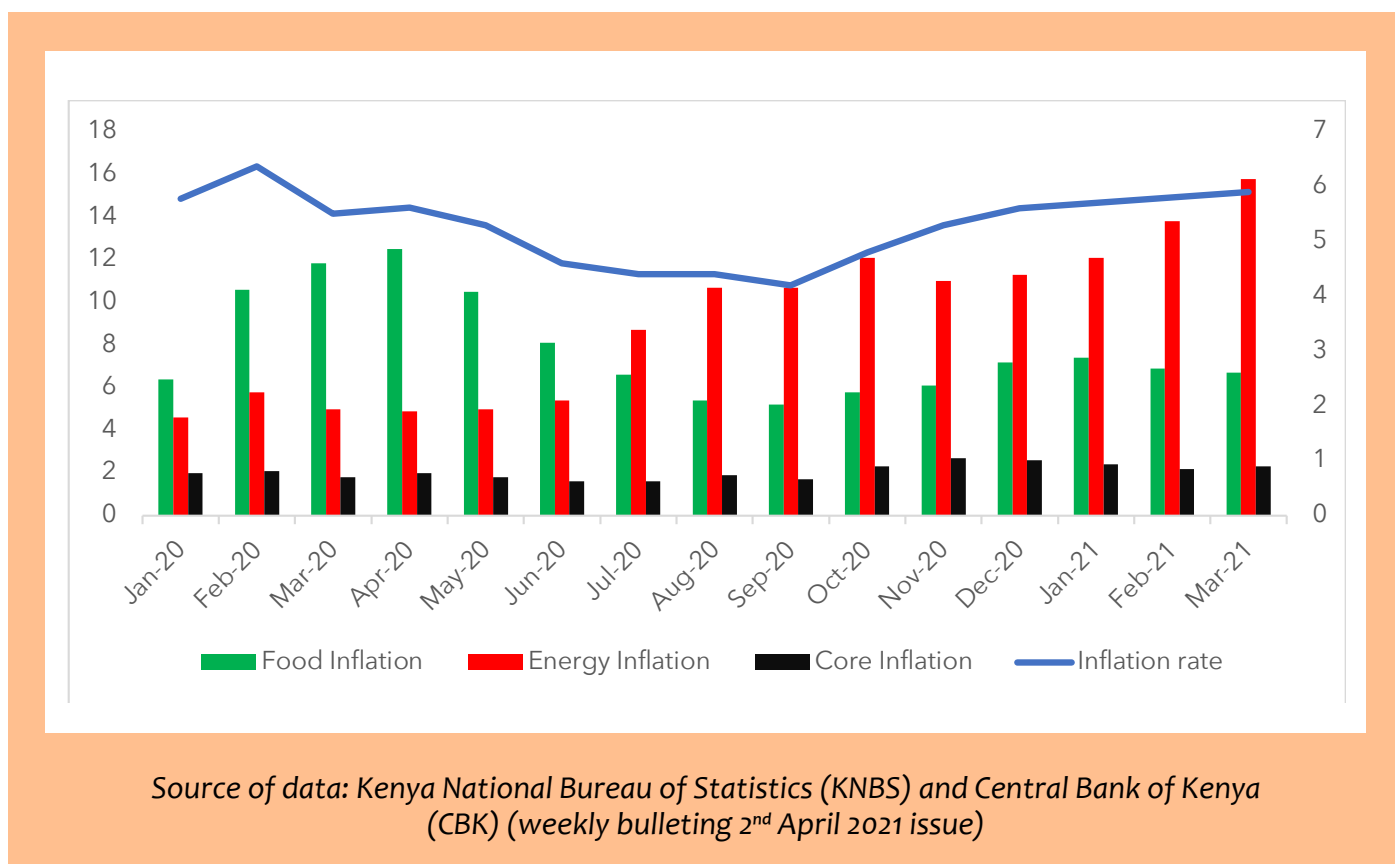
Disruptions to economic activity caused by the COVID-19 pandemic have continued to keep unemployment relatively high. Data in the Kenya National Bureau of Statistics (KNBS) Quarterly Labour Force Survey shows that there was a 5.2 per cent rise in unemployment in 2020. The demographic analysis shows that individuals aged between 20-29 continued to suffer the heaviest losses in employment, accounting for approximately 23.9 per cent of unemployed persons.

The overall inflation rate for January to March 2021 averaged 5.8 per cent compared to 6.6 per cent during the same months in 2020 and 5.2 per cent in October-December 2020. The inflation during the January-March maintained an increasing trend as shown in Figure 1. Food inflation rose to 7.4 per cent in January 2021, up from 7.2 per cent in December 2020 and 6.1 per cent in November 2020. The overall rise in food inflation was attributed to the net effect of an increase in prices of several food items, which outweighed decreases in the

prices of others. This was largely explained by the high demand experienced in December and January due to festivities and normalization of business operations. Among the most notable movers in key food items included cooking oil salad with 10.4 per cent increase in price between December 2020 and January 2021 and 3.9 per cent between January and February 2021 and cabbages that increased by 3.4 per cent and 4.4 per cent during the same period. The rising food prices weigh on households' incomes and consumption patterns. However, in March 2021, food inflation dropped to 6.7 per cent, lower than 12.3 per cent recorded in March 2020. Going forward, it would be imperative for the government to continue implementing policy measures to improve food provision, support the agriculture sector and provide cash transfers to the poor.

Fuel inflation remained elevated, averaging 13.9 per cent in January and March 2021 compared to an average of 4.9 per cent during the same months of 2020 and 11.5 per cent during the

Figure 1: Inflation rates (January 2020 to March 2021)



October-December quarter of 2020. The significant rise was attributed to increase in petrol and diesel prices by 9.0 and 5.8 per cent, respectively, between January and March 2021, leading to an increase in the transport index by an average of 2.3 and 1.5 per cent in February and March 2021, respectively. The Energy and Petroleum Regulatory Authority (EPRA), which sets the fuel prices, pegged the price increase to the higher landing cost of imported fuel. Average landed cost of importing a cubic metre of Super Petrol, Diesel and Kerosene rose by 20.9, 13.6 and 14.6 per cent, respectively, between December 2020 and January 2021. The increase in fuel prices further increased the cost of living from mid-February as it not only affected the transport sector but also the production and supply chain of goods.

Monetary and Financial Policy

An accommodative monetary policy stance adopted at the beginning of the pandemic was maintained in the quarter under review. During the Monetary Policy Committee (MPC) meeting held on 29th March 2021, the Central Bank Rate (CBR) was retained at 7.0 per cent. This is expected to support the recovery of economic activity while maintaining macroeconomic stability. The interbank rate remained stable, averaging 5.0 per cent between January and March 2021, which is a slight increase from an average of 3.7 per cent during October-December quarter of 2020 and above the 4.4 per cent registered during the same months of 2020. Similarly, yields on government securities have been stable at an average rate of 6.9 per cent in January and March 2021 quarter for the 91-day Treasury Bill. This reflects an increase of 3.0 percent compared to an average of 6.7 per cent attained during the October-December 2020 quarter.

The banking sector remained stable and resilient with strong liquidity and capital adequacy ratios. Growth in private sector credit averaged 8.1 per cent during October-December 2020 compared to an average of 8.0 per cent in the July-September 2020 period. Strong credit growth was observed in consumer durables (18.1%), agriculture sector (15.3%), transport and communications (13.6%), manufacturing sector (12.0%) and real estate (8.7%). The robust performance was supported by a recovery in demand associated with improved economic activity following the easing of COVID-19 containment measures. In January 2021, credit to

the private sector grew by 9.3 per cent compared to 7.3 per cent in the same period in 2020.

The ratio of non-performing loans (NPLs) to gross loans increased to 14.5 per cent in February 2021. NPLs rose in sectors such as agriculture, personal and household, real estate, and manufacturing but recovery in other sectors such as trade helped offset the rise. Despite the rise, the banking sector remained resilient, with the ratio of gross NPLs to gross loans averaging 13.8 per cent during October-December 2020 quarter, a slight increase compared to an average of 12.5 per cent realized in January-March 2020 quarter. Restructuring of loans amounting to Ksh 1.7 trillion was done by the end of February 2021 to provide relief to borrowers. As a result, household and personal loans amounting to Ksh 333 billion had the settlement period extended to cushion citizens during the COVID-19 pandemic period. However, the loan restructuring initiative expired on 2nd March 2021.

With the expiry of emergency measures announced by the Central Bank of Kenya (CBK) on 16th March 2020, such as the removal of transactional charges for mobile money transfers below Ksh 1,000 and transfers for bank accounts and bank wallets on 31st December 2020, Payment Service Providers (PSPs) introduced revised pricing structures on 1st January 2021. The main one included zero charges for mobile-to-mobile transfers of up to Ksh 100 and between mobile money wallets and bank accounts. The revised pricing structure increased

“ The overall inflation rate for January to March 2021 averaged 5.8 per cent compared to 6.6 per cent during the same months in 2020 and 5.2 per cent in October-December 2020. ”

the transaction costs for mobile money transfers of more than Ksh 100 while encouraging use of mobile money wallets and bank account transfers. Further, following the expiry of the suspension of listing of negative credit information for borrowers by Credit Reference Bureaus (CRBs) on 30th September 2020, financial institutions began the assessment of all loans that were performing before 1st April 2020. As at the end of January 2021, the number of blacklisted accounts with CRB had increased to 14.04 million, representing a 45 per cent growth from 9.67 per cent in August 2020. This underscored the struggles Kenyans undergo with repayments. The sharp rise in the negative listing was mainly driven by mobile loans and saddling borrowers with high interest rates according to Metropol, one of the licensed CRBs.

Fiscal Developments

Provisional data on Government's operations for the first six months of 2020/21 indicate a significant widening in fiscal deficit to Ksh 395,792 million from Ksh 277,579 million in the same period in 2019/20 (Table 1). This outcome is largely attributed to the impact of the COVID-19 health, safety, and economic measures that significantly curtailed revenue receipts and necessitated reallocations in

expenditure to support various social assistance programmes.

The imposition of restrictive COVID-19 measures – lockdowns, restriction of movements into and out of specific counties and closure of Kenya's airspace to commercial air traffic – in the opening quarter of 2020/21 and the slower than anticipated recovery of economic activity in the ensuing months dampened revenue collections for the first half of 2020/21. Compared with the corresponding period of 2019/20, total revenue including grants declined by an estimated Ksh 121,470 million (12.9%) to Ksh 819,052 million, which constituted 88.0 per cent of the budget target. Developments in revenue were largely driven by sharp contractions in receipts from Value Added Taxes (VAT) - both local and imports, excise taxes, import duties, Pay As You Earn (PAYE), and ministerial A-I-A. As a share of GDP, total revenue and grants in the half of 2020/21 was 7.3 per cent against 9.1 per cent in the corresponding period in 2019/20.

Aggregate net expenditure and lending decreased by 0.3 per cent (Ksh 3,257 million) to Ksh 1,214,844 million, representing 97.0 per cent of the budget target. The slowed performance in expenditure was driven by lower absorption of recurrent

Table 1: Fiscal summary

	[a]	[b]	[c]	[b]-[c]	[b/a]
	July-December				
	2020/21 Target	2020/21 ^P Actual	2019/20 Actual	Variance	% of Target
Revenue	934,935	819,052	940,522	-121,470	88%
Tax	743,909	642,890	733,901	-91,011	86%
Non-tax	163,751	167,663	196,473	-28,810	102%
Grants	27,275	8,500	10,147	-1,647	31%
Expenditure	1,258,879	1,214,844	1,218,101	-3,257	97%
Recurrent	842,859	823,376	827,747	-4,371	98%
Development	269,639	262,778	268,145	-5,367	97%
Equalization Fund	2,765	0	0	0	0%
County Governments	143,881	128,691	122,209	6,482	89%
Contingency Fund	2,500	0	0	0	0%
Surplus/(Deficit)	(323,944)	(395,792)	(277,579)	(118,213)	122%
Financing Activities	318,053	359,524	253,159	106,365	113%
Net Foreign financing	49,066	14,533	80,673	-66,140	30%
Net Domestic financing	268,987	344,991	172,486	172,505	128%

^P Provisional

Source of Data: National Treasury

expenditures by the National Government and below target transfers to County Governments. The reduction in recurrent expenditure was occasioned by below target payments on foreign interest payments, pension payments, wages and salaries and below target expenditure on Operation and Maintenance (O&M) attributed to the scaled down operations of the National Government in first half of the 2020/21 following the COVID-19 pandemic and exchange rate fluctuations.

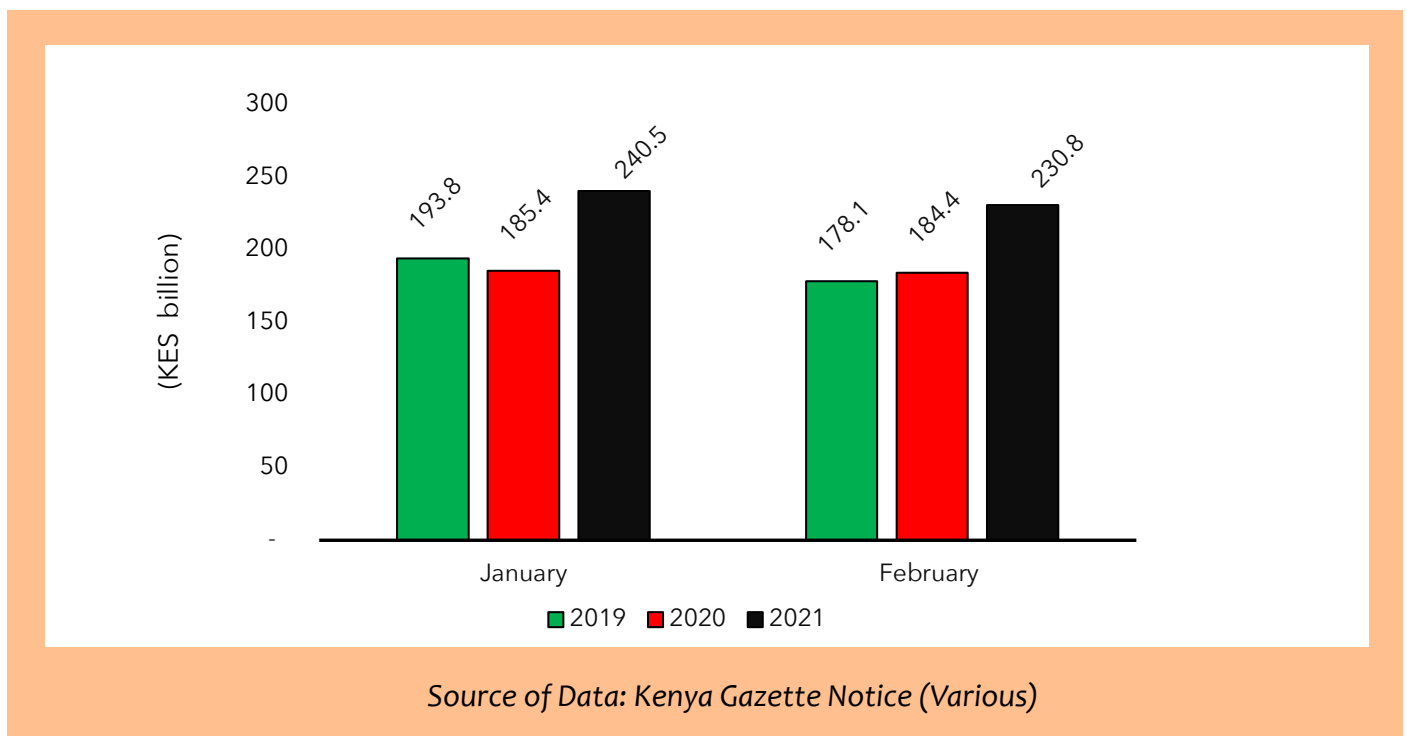
Budgetary financing requirements for the first half of 2020/21 were met through net borrowing totalling Ksh 359,524 million compared with Ksh 277,579 million for the same period of the previous fiscal year. Net external borrowing amounted to Ksh 14,533 million. This constituted external total inflows (disbursements) and Appropriations-in-Aid amounting to Ksh 95,244 million while external outflows (repayments) amounted to Ksh 80,711 million. Net domestic borrowing amounted to Ksh 344,911 million compared to Ksh 172,486 million in 2019/20 and against a target of Ksh 269,674 million, representing 128 per cent of the target. Domestic borrowing comprised of Ksh 21,572 million from the Central Bank (CBK), Ksh 125,146 million from commercial banks, Ksh 197,868 million from Non-Banking Financial Institutions (NBFIs) and Ksh

868 million from non-residents. Comparatively, for the first six months of 2019/20, the Ksh 172,486 million comprised of Ksh 9,967 million from CBK, Ksh 80,201 million from commercial banks, Ksh 78,096 million from NBFIs and Ksh 2,632 million from non-residents. This shows that there has been a considerable increase in domestic borrowing over the period. At the end of December 2020, total domestic repayments amounted to Ksh 464 million.

As a result of net borrowing activities in the first six months of 2020/21, gross public debt increased by Ksh 1,233.2 billion to Ksh 7,282.1 billion compared to Ksh 6,048.9 billion and Ksh 5,272.5 billion in first half of 2019/20 and first half of 2018/19, respectively. Gross public debt at the end of December 2020 comprised of 52.1 per cent external debt and 47.9 per cent domestic debt.

The cumulative actual revenue receipts at the end of February 2021 amounted to Ksh 1.67 trillion compared to Ksh 1.62 trillion in January 2020. The expansion of cumulative receipts in total revenue represent a 3.1 per cent increase attributable to tightening of revenue collection measures following the removal of tax relief measures instituted to cushion consumers and

Figure 2: Performance of total revenue receipts in 2019, 2020 and 2021



“ Budgetary financing requirements for the first half of 2020/21 were met through net borrowing totalling Ksh 359,524 million compared with Ksh 277,579 million for the same period of the previous fiscal year. ”

firms during the first wave of COVID-19. Figure 2 shows the actual monthly revenue receipts. In February 2021, revenue receipts amounted to Ksh 230.8 billion compared to Ksh 184.4 billion and Ksh 178.1 billion during a similar period in 2020 and 2019, respectively, indicating improvements in revenue collection for the month of February. In comparison to January 2021, collections in February slightly declined by Ksh 9.7 billion, indicating the slow recovery process amid the pandemic.

Total tax receipts for the month of February 2021 amounted to Ksh 121.3 billion compared to Ksh 97.7 billion in February 2020. Non-tax receipts

amounted to Ksh 10.3 billion compared to Ksh 8.0 billion in 2020 while domestic borrowing amounted to Ksh 94.5 billion compared to Ksh 73.6 billion in 2020, indicating the increased borrowing pressures resulting from the pandemic situation in the country.

Total cumulative cash issued to both national and county governments at the end of February 2021 grew by 3.6 per cent from Ksh 1.61 trillion in 2020. According to the National Treasury and Planning, the Exchequer Issues amounted to Ksh 1.67 trillion at the end of February 2021, representing 59.0 per cent of the annual net estimated issues for the year set at Ksh 2.83 trillion. This level of cash disbursement also represents an increase of 17.6 per cent (Ksh 249.9 billion) from January 2021 when the Exchequer Issues stood at Ksh 1.42 trillion. Overall, this shows that with the outbreak of COVID-19, there has been an escalation in Exchequer releases to MDAs and counties as the country combats the pandemic.

Table 2 shows that Exchequer cash issues released as of the end of January 2021 comprised Ksh 163.9 billion for development expenditure, Ksh 632.6 billion towards MDAs recurrent expenditure, Ksh 693.7 billion towards Consolidated Fund Services (CFS) and Ksh 179.5 billion to county governments as sharable revenue from the National Government. Expenditure Issues to the national government amounted to Ksh 1.49 trillion, representing 60.9 per cent of the revised gross estimates. This is 4.2 per cent higher than actual expenditure issues during similar period in 2020 when Exchequer Issues to the National government amounted to Ksh 1.43 trillion.

Table 2: Exchequer expenditure Issues (Ksh billion)

	Revised estimates as at Feb. 2020	Actual Exchequer issues as at Feb. 2020	Revised estimates as at Feb. 2021	Actual Exchequer issues as at Feb. 2021	Level of performance (2020)	Level of performance (2021)
Recurrent to MDAs	1,046.9	666.8	1,063.0	632.6	63.7	59.5
CFS	805.8	542.9	1,028.1	693.7	67.4	67.5
Development to MDAs	436.4	220.4	355.7	163.9	50.5	46.1
Total Issues to NG	2,289.1	1,430.1	2,446.8	1,490.2	62.5	60.9
Total Issues to CGs	362.8	182.4	383.6	179.5	50.3	46.8
Grand total	2,651.9	1,612.4	2,830.4	1,669.7	60.8	59.0

Source National Treasury and Planning, Kenya Gazette

Note: CFS = Consolidated Fund Services; NG= National Government; and CGs=County Governments

External Sector

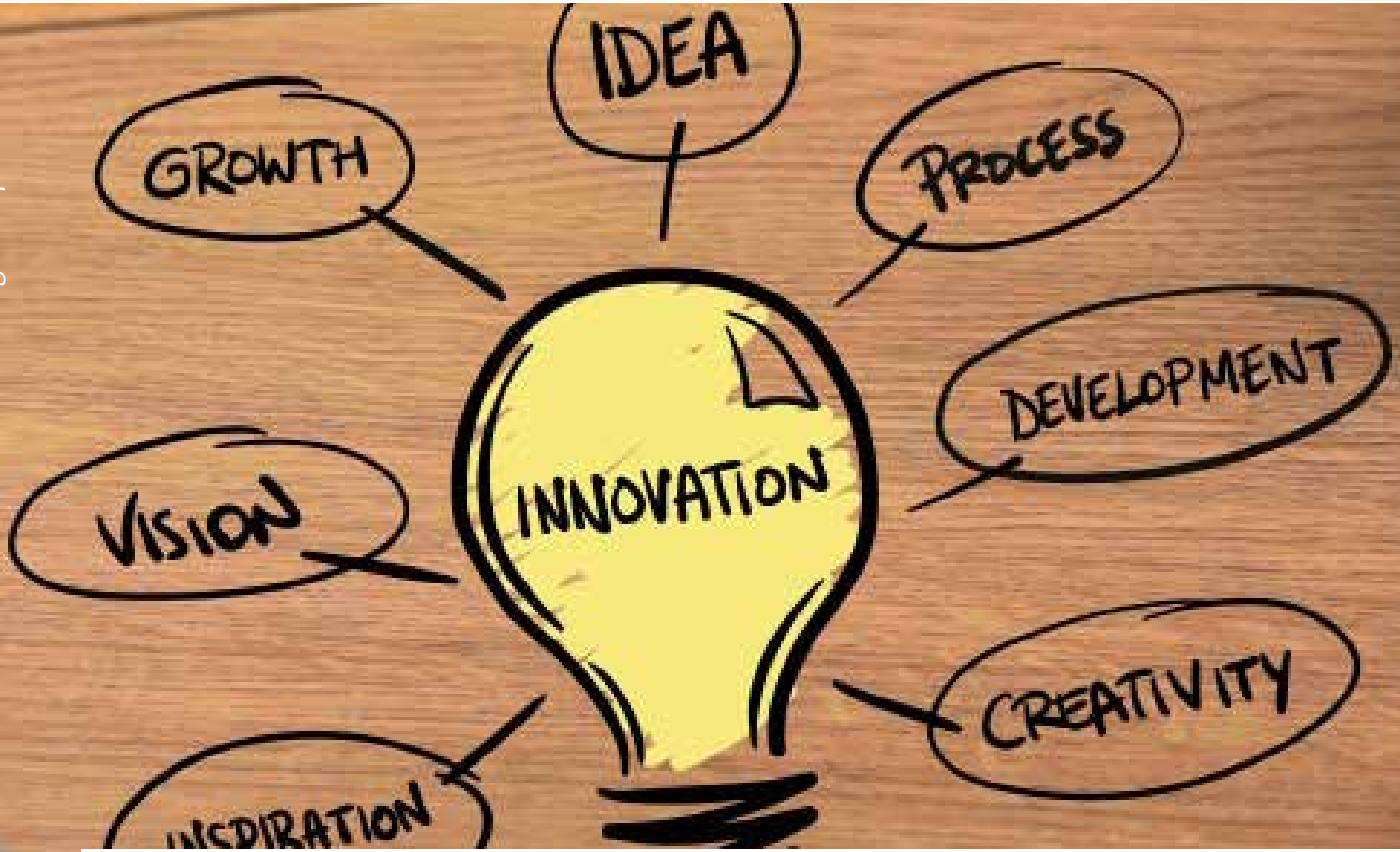
The Kenya Shilling remained strong against the US dollar between January 2021 and March 2021. In March 2021, the Kenya Shilling exchanged at an average of Ksh 109.7 against the dollar compared to an average of Ksh 109.8 in January 2021, representing an appreciation rate of 0.1 per cent. Similarly, the Kenya Shilling appreciated by 2.2 per cent against the Euro, from an average of Ksh 133.8 against the Euro in January 2021 to an average of Ksh 130.9 in March 2021. However, the Kenya Shilling depreciated by 1.6 per cent against the Sterling Pound, exchanging at an average of Ksh 152.2 in March 2021, from an average of Ksh 149.8 in January 2021.

The foreign exchange reserves declined but remained within the statutory requirements. The stock of official reserves decreased by 3.3 per cent between January 2021 and March 2021. The reserves stood at US\$ 7,712.5 (4.7 months of import cover) in January 2021 but declined to US\$ 7,616.3 (4.7 months of import cover) in February 2021 and further to US\$ 7,361.8 (4.5 months of import cover) in March 2021. Nonetheless, the reserves are still within the statutory requirement of at least 4 months of import cover and equal to the EAC's convergence criteria of 4.5 months of import cover.

Total diaspora remittances recorded a 10.7 growth in 2020, driven by strong flows from North America. Total diaspora remittances increased from a total US\$ 2,796.6 million in 2019 to a total of US\$ 3,094.3 million in 2020. The increase in diaspora remittances was mainly driven by increase in remittances from North America that recorded a 29.9 per cent increase from US\$ 1,343.0 million in 2019 to US\$ 1,744.4 million in 2020. On average, the share of remittances from North America in total remittances is more than 50 per cent. Similarly, remittances from the rest of the world increased by 2.8 per cent from US\$ 790.6 million in 2019 to US\$ 813.0 million in 2020. However, during the

same period, diaspora remittances from Europe recorded a 19.0 per cent decrease from US\$ 663.0 million in 2019 to US\$ 536.8 million in 2020. The decline in inflows from Europe is mainly attributed to COVID-19 cases, which led to lockdowns and disruption in movement in different countries in Europe. In January and February 2021, total diaspora remittances stood at US\$ 538.6 million, representing a 12.6 per cent growth compared to the same period in 2020. This was mainly driven by strong growth recorded by remittances from North America that grew by 43.2 per cent in the same period. However, there was a huge decline in remittances from the rest of the world that declined by 33.8 per cent in January and February 2021 compared to the same period in 2020. Remittances from Europe increased by 13.2 per cent, from a total of US\$ 85.2 million in January and February 2020 to US\$ 96.5 million in the same period in 2021.

The total value of trade recorded a 20.4 per cent decline in 2020, driven mainly by decreases in the values of imports and re-exports. The value of trade decreased from Ksh 3,011.5 billion in 2019 to Ksh 2,397.7 billion in 2020. This was mainly attributed to a fall in the value of imports and re-exports by 8.5 and 2.4 per cent, respectively. However, despite COVID-19, which affected exports in the first half of 2020, exports rebounded, growing by 5.4 per cent from Ksh 608.1 billion in 2019 to Ksh 641.2 billion in 2020. The value of tea, coffee and horticultural exports also grew by 14.6 per cent, 7.5 per cent and 3.9 per cent, respectively, in 2020. In January 2021, the value of tea, coffee and horticultural exports stood at Ksh 11,378.6, Ksh 1,380.6, million and Ksh 11,055.0 million, respectively, representing a decline of 0.6 per cent for tea but a growth of 33.6 per cent and 16.3 per cent for coffee and horticulture, respectively, compared to the same period in 2020.



Fostering Innovation to Build Resilience in the Economy

Anne Gitonga, Peris Wachira and Rufus Chebii

Innovation is the introduction of a new product or service or simply a new way of doing things that result in some efficiency gains and added value to the customer, thus contributing to increased productivity and competitiveness. Innovation has been identified in national, regional and global development agenda as critical for socio-economic growth. Kenya's Vision 2030 and the EAC Vision 2050 identify innovation as an enabler of economic development, while the Agenda 2063 of the Africa Union, and Sustainable Development Goals (SDGs) identify science, technology and innovation (STI) as a driver of industrialization and economic growth and development, respectively.

There is increasing evidence that innovation contributes to resilience both at the firm and community level. For instance, Gulati, Nohria and Wohlgezogen¹, have established

that companies that outperform peers post-recession invest in the future through increased expenditure in marketing, research and development (R&D) and new assets. These activities are aimed at giving the companies a competitive advantage. Not many companies, however, take this approach in the face of an economic shock. The study for instance established that only 17 per cent of the 4,700 companies sampled undertook R&D during recession.

Shocks emanating from health or environmental emergencies affect businesses and communities globally. Shocks such as the COVID-19 pandemic have severe impact on sustainable development and, therefore, building the resilience of individuals, businesses, communities, and countries is critical is attaining development agendas. Innovation in developing technological and industrial structures needed for adaptation to

¹Gulati R., Nohria N. and Wohlgezogen F. (2010), "Roaring out of recession." Harvard Business Review, 88, No. 3: 62–69.

the changing economic landscape is essential to building resilience². Resilient companies and communities are those that have the capability to absorb and adapt to shocks, self-organize and continue carrying out their activities sustainably. Resilient companies seize opportunities to expand markets. They are better equipped to deal with setbacks. One such company that demonstrated resilience during the SARS pandemic in China over 2002 to 2004 was China's then small e-commerce establishment, Alibaba. The SARS pandemic in China saw the closure of manufacturing companies and reduction in retail sales as residents were staying at home, similar to the approach currently adopted with the COVID-19 mitigation measures. Alibaba, despite the prevailing circumstances, launched Taobao in May 2003, a consumer e-commerce platform providing solutions needed by the country to facilitate movement of goods during self-quarantine. The platform

has grown over the years, strengthening Alibaba's position as a market leader globally in e-commerce.

The community level resilience is the ability to undertake social learning, defined as identifying existing knowledge from different stakeholders, thus leveraging on social capital for mitigation and adaptation in the face of hazards³. Social innovation such as Ushahidi has emerged as a critical tool in enhancing resilience within communities. Ushahidi is an electronic platform created to coordinate information on incidences of post-election violence in Kenya in 2007. It has been instrumental in crisis management and has since been used in several countries. The platform, through crowdsourcing, collects and visualizes data with the aim of mapping to present information in a coordinated manner, thus ensuring coordinated response when used in times of crisis/need.

Table 3: Kenya's innovation performance

Year	Name of index	Score out of 100 ⁴	Global Rank	LMIC Rank	SSA Rank	Efficiency (output/input)
2020	GII	26.13	86	10	3	0.50
	• III	35.03	92	11	14	
	• IOI	17.40	77	10	4	
2019	GII	31.13	77	10	2	0.63
	• III	38.63	89	12	5	
	• IOI	24.20	64	8	1	
2018	GII	31.07	78	11	3	0.69
	• III	36.85	91	13	6	
	• IOI	25.30	64	9	1	
2017	GII	30.95	80	10	3	0.66
	• III	37.19	91	11	6	
	• IOI	24.71	70	9	2	
2016	GII	30.36	80	9	3	0.76
	• III	34.44	97	13	8	
	• IOI	26.28	65	8	1	

Source of Data: Global Innovation Index Reports (Various Issues)

² Cooke P., Parrilli M.D., Curbelo J.L. (eds) (2012), Innovation, global change and territorial resilience. Edward Elgar, Cheltenham

³ Pfeffe M.J. (2003), "Social learning for collaborative natural resource management". Society and Natural Resources, Vol 15: 309-326.

⁴ 0 is the lowest and 100 is the highest

A key policy question, therefore, is how Kenya could leverage on innovation to enhance resilience. A starting point is to establish the status of innovation in Kenya.

Status of Innovation in Kenya and Key Policy Gaps

Kenya is ranked highly in Sub-Saharan Africa (SSA) in terms of innovation. In the 2020 Global Innovation Index, Kenya stood at position 86 and third in SSA with a score of 26.13. Although the Global Innovation Index (GII), Innovation Input Index (III) and the Innovation Output Index (IOI) scores for Kenya have been improving over the years, the overall innovation efficiency has shown a declining trend (Table 3).

At the firm level, as established in the 2016 MSME survey, innovation occurs in one out of every ten MSMEs in Kenya.⁵ The key obstacles to innovation among MSEs, according to KIPPRA's 2019 Special Paper on County Business Environment for Micro and Small Enterprises in Kenya, are high costs of innovation, lack of incentives to innovate, limited appropriate financing mechanisms and complicated patenting process.

These statistics reveal that there is some innovation taking place, though coupled with inefficiencies. The Kenya Vision 2030 calls for an economic and institutional framework and innovation system that promotes knowledge generation. For this to be achieved, inefficiencies at the institutional level need to be addressed. The enactment of the 2013 Science, Technology and Innovation Act initiated some institutional reforms, including the establishment of the Kenya National Innovation Agency (KENIA) to promote innovation activity in the country and National Research Fund (NRF) to finance research systems. Further, through KENIA, the government has established 'leaders in innovation fellowship' and 'National innovation Awards' targeting innovators.

⁵ Kenya National Bureau of Statistics (KNBS), Micro, Small and Medium Establishments; Basic Report 2016

⁶ The budget allocation towards Research and Development in Kenya is only 0.79 per cent of GDP against a target to 2 per cent of GDP.

“Resilient companies and communities are those that have the capability to absorb and adapt to shocks, self-organize and continue carrying out their activities sustainably.”

Additional institutional reforms in the pipeline as provided in the Third Medium-Term Plan (MTP III) of the Kenya Vision 2030 is the establishment of innovation incubation hubs at the county level to strengthen the innovation infrastructure. Despite these policy interventions, weaknesses in innovation infrastructure persists. Further, there are low levels of commercialization of innovation, weak linkages amongst players in the innovation ecosystem, low technical skills, low uptake of R&D and limitations in financing. Further, the usage of rewards or awards to motivate innovators is minimal due to inadequate budget allocations⁶.

Acknowledging that innovation plays an important role in enhancing resilience, what can the government prioritize? Going by the evidence presented above, investment in knowledge generation and innovation activities even during economic shocks should take precedence. Companies such as AliBaba allocate 10 per cent of revenue to R&D; the company is currently ranked amongst the most innovative companies globally.

R&D is also important at the community level and can be achieved through crowdsourcing. The premise of crowdsourcing is to obtain

and/or gather information by electronic means for a utility and/or problem solving, which is the same objective of R&D. Innovation at the community level can further be nurtured through awards, prizes and rewards. Literature points out that use of awards not only motivates innovation, but it also crowdsources wider innovations from different communities beyond a targeted group. For instance, Tanzania's Dr Askwar Hilonga in 2015 received the Africa Prize for Engineering Innovation by the Royal Academy of Engineering for his water filter innovation. The Africa Prize for Engineering Innovation provides cash prizes and goes further to support commercialization through training and mentoring. Dr Hilonga benefited from information on scaling his innovation and enhancing market access through this training. Cash prizes are not the only rewards that can stimulate innovations especially those that include grants, up-front research subsidies and marketing monopolies that can be enforced with appropriate intellectual property rights. Awards can further be used to recognize social innovations that introduce new products or model that meet the needs of underserved populations.⁷ *Ushahidi* for instance received a Classy Award for Social Innovation in 2016. The Classy Awards recognizes social enterprises that embrace new ideas, models and technologies to address social and environmental challenges.

Prizes have in effect been used historically as “pull mechanism” for innovation and, as far back as 1800s, were used to scale-up innovations. In 1802, for instance, Dr Edward Jenner received a cash prize in England following his discovery leading to Smallpox vaccine and used the award to spread vaccination in other countries.⁸ Smallpox was an infectious and deadly disease in the eighteenth century.

In acknowledging that innovation as evidenced above is a catalyst to socio-economic

development, Kenya's innovation policy review and development should be cognisant of the role of two policy players brought out in this article: Resilient for-profit companies that provide products and services that meet market needs and communities or social enterprises that introduce innovations that enhance social welfare. To nurture the first, priority should be on establishing effective regulatory frameworks, policy enablers and innovation infrastructure while addressing barriers to innovative entrepreneurship. This includes promoting R&D. It will require the creation of technical skills and capabilities, thus knowledge driven education policies such as implementation of National Critical STI Skills Development Strategy, proposed in MTP III. A second and third critical component to promoting firm level R&D is developing appropriate finance and relevant infrastructural support R&D. This calls for prioritization of the development of incubation policy and innovation policy and review and structuring of the National Research Fund to facilitate more firm level R&D. Kenya could borrow from India, which is one of the best performing countries globally in terms of innovation due to its high expenditure in R&D and education. For instance, 5.5 per cent of the country's GDP is allocated towards supporting R&D. In addition, the government of India has initiatives geared towards promoting innovation among start-ups, supporting the scaling up and sustainability of innovation and facilitating credit to innovators through public-private partnerships (PPPs). Similarly, Kenya's policy framework addresses challenges in accessing appropriate finance and challenges associated with scaling and commercializing innovations.

For community or social innovations, effort should be made to enhance the national innovation awards to include rewards and prizes to stimulate the development and scaling up of innovations, particularly those that promote social welfare and enhance resilience.

⁷ Phills, J.A.J., Deiglmeier, K. and Miller, D.T. (2008), “Rediscovering social innovation”, *Stanford Social Innovation Review*, 6(4): 34-43.

⁸ Smith K. A. (2011), “Edward Jenner and the small pox vaccine”. *Frontiers in Immunology*, 2: 21.



Building Sustainable Smart Cities to Endure COVID-19 and Future Shocks

By Charity Kageni and Brian Nyaware

Introduction

According to International Telecommunication Union (ITU), a smart city is an innovative city that uses Information and Communication Technologies (ICTs) and emerging technology frameworks, including the Internet of Things (IoT) and Big Data (BD), to improve quality of life and efficiency in urban services and competitiveness. Further, smart cities attempt to meet present and future generations' needs with respect to economic, social, environmental, and cultural aspects.

Major cities across the globe have witnessed unprecedented population growth over the past years, which has motivated the need for a paradigm shift from the traditional urban planning designs to the smart cities concept design. According to World Bank (2020), approximately 56.2 per cent of the global population live in urban areas, and this figure is projected to increase to 66 per cent in 2050. The primary cause of urbanization is attributable to search for better education, employment, and business opportunities in urban areas. However, rapid urbanization has



continued to create immense pressure on existing urban infrastructure and services. Therefore, the exponential increase in urban population heightens the need for smart and innovative solutions to tackle the emerging challenges at city level, which hinders sustainable growth.

On a global level, smart city policies and initiatives are embedded in United Nations (UN) Sustainable Development Goal (SDG) 11 and the New Urban Agenda, which calls for adopting a smart-city approach that uses digitalization opportunities, clean energy, and technologies. At the regional level, the African Union Agenda 2063 focuses on creating modern and liveable habitats and quality basic services and advocates policies, regulations, and partnerships aimed at building sustainable smart cities.

According to the Cities in Motion Index, 2020, which ranks the world's major cities based on development across key performance indicators for smart cities, London, New York, Paris, and Tokyo were ranked as the world's top smart cities. Nairobi city was ranked 154 out of 174 in 2020, an improvement from 162 in 2019. The milestones achieved are mainly driven by ICT strategies and policies in service delivery. The key strategic policies in Kenya include Digital Economy Blueprint, the Kenya Vision 2030, National Broadband Strategy and National ICT masterplan. Construction of a smart city is expected to create jobs and enable infrastructure optimization, smart communication services, and improved citizen participation.

Since the emergence of COVID-19, major cities and urban areas have recorded the highest levels of infection. In Kenya, the existing socio-economic inequalities have increased the risk of infection among vulnerable populations in urban areas. The concept of smart cities is central to improving service delivery, quality of life, and inclusivity hence key in building resilience and mitigating the effects of COVID-19. The critical pillars of a smart city infrastructure include smart buildings, mobility, energy, health care, water, and sanitation.

Smart Buildings

Smart buildings integrate the different physical systems intelligently to ensure that all the systems act together in an optimized and efficient manner. Smart building management systems improve building energy efficiency, reduce water waste, and provides optimum usage. Implementation

“

According to World Bank (2020), approximately 56.2 per cent of the global population live in urban areas, and this figure is projected to increase to 66 per cent in 2050.

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of smart building solutions is estimated to save almost 30 per cent of water usage, 40 per cent of energy usage, and reduces overall building maintenance costs by 10 to 30 per cent. The smart buildings are also key in implementing the COVID-19 guidelines. By embedding LED lighting, smart buildings can track people's movement and provide visual cues on social distancing and programming elevators to limit close contact. Besides, smart buildings can assist in planning for occupancy in workplaces by deriving occupancy analytics to refine the ventilation strategy, reduce the density and prioritize cleaning areas.

Smart Mobility

Smart mobility refers to approaches that reduce congestion and foster faster, greener, efficient, and affordable transportation options. Smart systems leverage mobility data on patterns and volume to help optimize transport needs and act as a critical component in tracking the population, especially during the pandemic. Smart mobility systems integrate the entire array of multimodal transport options in a city, including individual mobility and mass transit efficiently. Modern intelligent transport systems usually comprise inter alia a network of sensors, global positioning system-tracked public transportation, dynamic traffic lights, passenger information panels, automatic vehicle registration plate readers, and, most importantly, the capability of integrating live data from most of the sources. Smart mobility

can be used to monitor movements in walkways, access and analyse travel information to come up with travel patterns, track COVID-19 patients and establish data centres to help in contact tracing.

Nairobi city uses a smart technology application, the Intelligent Transport System, which uses artificial intelligence to manage urban traffic. The system discerns the general traffic conditions and obtains traffic flow data in real-time.

Smart Energy

Smart energy management systems monitor and optimize energy distribution and usage by providing energy consumption to improve energy efficiency of buildings. A key component of smart energy infrastructure is smart grids, which refers to electricity delivery system from point of generation to point of consumption integrated with ICT for enhanced grid operations, customer services and environmental benefits. Smart metering is also useful especially in the event of a pandemic, where consumers can easily track their consumption and make payments to power utilities on time. In Kenya, however, smart metres are mainly used by large industries, leaving out majority of small and medium enterprises and domestic electricity consumers.

Smart Health System

Smart cities can use Big Data to develop predictions or identify hotspots of population health such as epidemics or health impacts during extreme weather events. Smart health approaches incorporate Artificial Intelligence (AI) machines and robots to reduce patient-doctor contact, referred to as tele-consultation. Other smart health-care approaches include crowdsourcing to collect data on epidemics and predict epidemic outbreaks and take the necessary precautions and automated alerts for patients concerning medications and health check-ups.

In Kenya, application of smart health is gradually gaining ground following the establishment of a telemedicine center for Coronavirus detection at Kenyatta National Hospital and robots to take patients' temperatures, monitor social distance, and store patients' data. Smart health approaches are evident in Sub-Saharan Africa. South Africa uses an electronic bed management system to monitor hospital bed availability, while Rwanda and Ghana use drones to deliver medicine and

vaccines to patients.

Smart Water Systems

With the high level of urbanization, smart cities focus on smart water management systems using digital technology to solve scarcity, reduce costs and waste, and increase water distribution reliability and transparency. Access to safe and improved water sources is particularly an essential basic infrastructure in the fight against COVID-19. Customers are provided with real-time information on the water situation and relevant information to conserve water, leading to lower water bills. It is estimated that smart water metres reduce water leakage by over 50 per cent.

The application of smart water systems is low in Kenya; however, Nairobi Metropolitan Services (NMS) is set to launch a water app that will ensure efficient water distribution to Nairobi residents and keep track of water use. Using a digitally enabled system to analyze the available flow and pressure data to determine anomalies (such as leaks) in real-time is crucial for inefficient water management.

Smart Waste Management Systems

Smart waste management systems are a critical component for smart cities in creating higher efficiency in terms of resources and costs associated with keeping their cities clean. Waste management typically includes the monitoring, collection, transport, processing, recycling, and disposal of waste. Smart waste management systems reduce waste and categorize the type of waste at the source and develop methods for properly handling waste. Smart waste management systems enable monitoring the movement of various forms of waste. COVID-19 creates additional challenges in waste management, especially healthcare waste. An automatic waste collection system (AWCS) is smart and sustainable waste management that avoids manual handling and waste contact.

Conclusion

Real-time data and smart technologies such as the Internet of Things (IoT) and Artificial Intelligence (AI) are vital in implementing smart city strategies and have a great potential in developing more effective and efficient response and recovery measures. Building smart cities enhances service delivery and the overall quality of life.

However, smart cities may also unintentionally deepen existing divides between already digitally marginalized groups and better-connected groups due to growing polarization between those at ease with technology and those at the lower end of the skills distribution. Also, there are risks associated with citizen privacy due to open data policy, whereby personal information could be unduly shared with undesirable persons or manipulated for unwanted purposes. Lastly, Kenya is yet to pick up on some of the ICT applications against COVID-19 due to a lack of skills, digital literacy, human capital, innovations, and business models that may suit the Kenyan situation.

Recommendations

Fast-tracking the implementation of smart cities in Kenya is crucial due to the rapid urbanization that creates pressure on existing infrastructure and service delivery and endure various shocks. Counties also need to incorporate smart city planning design.

Peoples-centred smart city policies: The design, implementation, and monitoring of smart city policies should be people-centred, focusing on

improving access to infrastructure to all the segments, especially the urban poor. Further, policies upholding privacy would be essential when building smart cities in Kenya to build confidence among the population.

Technical assistance and capacity building to stakeholders on smart city strategies, policies, solutions, technology, and innovation to deliver sustainable urban development outcomes are critical.

Local content in smart infrastructure: Smart infrastructure concepts need to be made locally relevant and respond to local development needs. Context, culture, and economics of the city play a role in this process.

Harness the local innovation system: Harnessing a local innovation system, which comprises, among other things, entrepreneurs, local universities, and research centres, is key to addressing localization. Therefore, cities need to consider how best to use existing innovation infrastructure such as science parks, technology incubators, and innovation hubs to develop new smart city ideas and adapt smart city concepts.

New Publications



Developing Resilient and Sustainable Food Systems in the COVID-19 Era and Beyond

By Dr E. Kihiu and J. Laichena

Introduction

The United Nations Sustainable Development Goal 2 recognizes the importance of sustainable food systems, and specifically target 2.4 strives “to ensure sustainable food production systems by implementing resilient agricultural practices, which help maintain ecosystems and strengthen capacity”. The Framework for Action (FfA), one of the two outcome documents of the 2014 Second International Conference on Nutrition (ICN2), provides a menu of policy options to lead country action and successfully reach the SDGs. Further, the United Nations Decade of Action on Nutrition proclaimed in April 2016 by UN Member States provides a holistic platform for action, which calls upon the Food and Agriculture Organization (FAO) and the World Health Organization (WHO) to lead in implementation of the Nutrition Decade and reach its aim to accelerate implementation of the ICN2 commitments, achieve the global nutrition and diet-related Non-Communicable Diseases (NCDs) targets by 2025.

At the national level, the Constitution of Kenya 2010 stipulates that adequate food of acceptable quality and freedom from hunger is a right for all Kenyans. Towards achieving this, the government has put in place the “Big Four” Agenda, a developmental guide, focused on basic needs that offer a high quality of life to all its citizens, and promoting a strong inclusive economic growth as the country moves towards becoming an upper middle-income economy by 2030. Among the “Big Four” initiatives is enhancement of food and nutrition security by the year 2030. The country’s Third Medium Term Plan (MTP III) 2018-2022 is focused on implementing policies, programmes and projects designed to achieve the “Big Four” agenda.

Food systems in the COVID-19 Era

Globally, current food systems are unsustainable and do not provide the foods the population desperately need. Even before the COVID-19 pandemic, food systems faced

notable challenges as documented by the Global Report on Food Crises, which identified 135 million people worldwide as currently or imminently being food-insecure. The pandemic is likely to push an additional 130 million into hunger. In Kenya, the Ministry of Health protocols such as social distancing, restrictions on movement, and other reactions aimed at curbing the pandemic have made it more difficult to grow, transport, process, distribute, and sell food. In addition, the slowdown in agricultural trade as a result of movement restrictions, locally and internationally has already reduced food security in urban areas and other groups that were receiving food through institutional feeding programmes that may have closed down their distribution centres.

The COVID-19 pandemic has exposed the vulnerability of the entire agriculture food system value chain from input supply, production, transportation, processing, retailing, wholesaling, and preparation of foods to consumption and disposal-globally, albeit differently. The pandemic has showed that food systems are not as resilient as they could have been in response to COVID-19. It has highlighted the cascading effects of disruptions in production, supply chain, and demand in the food system. These disruptions have emanated from restrictions on movement, causing supply-side disruptions to include availability of key intermediate inputs, accumulation of produce at the farm gate and access to labour; losses of livelihoods thereby jeopardizing the capacities to buy food, and shifts in consumer demand towards relatively less expensive but also less nutritious foods. In the country, the impact of the pandemic on food systems has been particularly hard on the poor population that is already struggling. As the pandemic evolves with the third wave confirmed and restriction of movement imposed in five counties of Nairobi, Machakos, Kajiado, Kiambu and Nakuru, the government will require to put in place reliable health and safety information, provide safe access to markets, including reliable transportation and crop collection points where adequate safety measures are taken, and devise response

measures to cushion the vulnerable groups in the five designated disease infected counties.

Opportunities to Developing Resilient and Sustainable Food Systems

Though the pandemic has highlighted and magnified existing fragilities in food systems, COVID-19 should be seen as an opportunity and a wakeup call to nurture pfood systems that are capable of tackling the existing and emerging challenges and coordinate actions for resilient and sustainable food systems. The International Food Policy Research Institute (IFPRI) characterizes such an ideal system as one that is nutrition, health, and safety-driven, productive and efficient, environmentally sustainable and climate-smart, and inclusive. Towards this end, it is imperative to identify key action areas to build more resilient and sustainable food systems.

- a) **Institutional and policy environment:** While sectoral policies affecting the food system may have complementary elements thus creating synergies, they may also diverge and negatively diminish the results of the other. For instance, policies on financing, trade, early warning, disasters and emergency management, transport, public health, food and nutrition education in schools are likely to have an effect on agricultural infrastructure development to boost productivity of the sector, and sustainable food availability and access, food in crisis and emergency, food safety and quality and nutrition improvement. There is thus need for the country to develop coherent policies based on evidence and dialogue between the different sectors that impact food systems. Coherence can be strengthened by forging collective solutions in the food systems through multi-stakeholder and multi-sectoral frameworks at county and national levels. In addition, collective solutions are likely to foster strategic coordination and commitment to emerging challenges in the food system among stakeholders and sectors.

b) Diversified food systems: With the COVID-19 pandemic, it has become evident that high nutrient value food chains are more vulnerable to shocks as they are highly perishable. Besides, the traditional food crops that provide high nutritional value and do well with climate shocks are slowly diminishing and being abandoned in favour of new varieties of crops developed to cope with modern challenges of food production systems. The Intergovernmental Panel on Climate Change (IPCC) identifies diversification in the food system, featuring production of foods based on coarse grains, legumes, fruits, vegetables, nuts and seeds, and animal-sourced food as a key element in creating resilient food systems. As highlighted by the IPCC, diversification in the food system, which includes implementation of integrated production systems, broad-based genetic resources, and diets, present major opportunities in mitigating and adapting to climate change.

Further, diversification is likely to increase the availability and lower the cost of quality nutrient-dense foods, placing households in a better position to withstand dietary diversity shocks emanating from shocks such as the COVID-19 pandemic. Diversified diets in turn present significant benefits to human development and health. In addition, diversified food systems will also create a broad diversity, thus cushioning incomes and food consumption patterns among households.

c) Targeted investments in the agri-food sector: Digital transformation of food systems will help reduce pervasive transaction costs and information asymmetries along the food value chain, particularly among small scale farmers. Digital technologies offer flexible solutions to access inputs; strengthen availability of timely, accurate and

granular data; output market linkages and access to supportive services such as insurance, credit, information and extension advice. For instance, digital platforms such as e-extension mobile apps facilitate access to advisory and information among farmers. In addition, use of remote sensing via satellites, weather technologies and drones facilitate precise capture of spatial temporal data from farms, thus enhancing access to tailored information and advice, which leads to increased productivity. Further, technologies for data management, analytics, surveillance and forecasting are important in monitoring and giving intelligence insights in key indicators affecting food security, such as extreme weather conditions and emergencies such as the desert locust outbreak. To support the digital revolution in the food system, there is need for strong public investment in complementary infrastructure.

Further, there is need for investments in extensive processing facilities, post-harvest management and technologies, supportive infrastructure and transport along the food value chain to reduce food loss and waste. Reduction in food loss and waste will not only help close the food gap in the country but also lower climate change risks through reduced cultivated area needed to produce food.

The public sector alone cannot support the investments required to strengthen food systems in the country. To support the public sector in the transformation towards resilient and sustainable food systems, there is need to strengthen and support private sector associations, and partnership along the food value chains. This can be achieved through risk mitigation strategies and supportive regulatory framework to promote a favourable business climate.



The Role of Technological Advancement in Improving the Performance of Kenya's Floriculture Industry

By Beatrice Kinyua

Introduction

The Kenyan flower industry serves as a key economic activity within the agricultural sector. Cut flower trade is a major source of foreign exchange; in 2019, it was the third largest export earner, generating Ksh 100.3 billion (Agriculture and Food Authority, 2020). Globally, Kenya's market share of flower supply is estimated at 8.4 per cent since it is the third largest global exporter with major market destinations being The Netherlands, the UK, Germany, Saudi Arabia and UAE (ITC, Data Trademaps, 2019). Furthermore, the sector's contribution to GDP is around one per

cent, with exports accounting for 72 per cent of all horticultural trade (Kenya National Bureau of Statistics, 2020).

In the wake of COVID-19, the Kenya Flower Council reported that export volumes had registered a drastic fall. Quantities of cut flowers exported declined from 17,561 metric tonnes in February 2020 to 10,438 metric tonnes in March 2020 and falling further to 7,989 metric tonnes in April 2020. In November 2020, however, the sector witnessed an increase in export volumes to 12,873 metric tonnes (Kenya National Bureau of Statistics, 2020). Consequently, the overall dismal export



performance at the onset of COVID-19 resulted to massive job losses. At least 4 million people dependent on the flower industry for livelihood had been affected by the adverse effects of the pandemic. Though the industry is largely operated by private sector players, the recent global crisis has elicited the need for policy measures to curtail the harmful outcomes to avoid an economic slump.

The trade losses and subsequent unemployment are a result of government containment measures, which included a ban on public gatherings and the restriction of international flights that grounded passenger planes. Cargo aircrafts also changed their flight routes to more lucrative destinations. Additionally, at the global level, lockdowns in many European countries disrupted supply chains and led to a 70 per cent decline in cut flower prices (Bloomberg, 2020).

Notwithstanding, COVID-19 was a catalyst for innovative solutions throughout the world. However, the Kenyan flower industry did not witness much innovation to cushion it against the effects of the pandemic.

Context

The Kenyan cut flower industry was severely affected by COVID-19 as 30,000 temporary workers lost their jobs while 40,000 permanent workers were sent on compulsory leave (International Finance Corporation, 2020). Similarly, according to the Kenya Plantation and Agriculture Workers Union (KPAWU), non-unionized workers, majorly casual labourers, proceeded for unpaid leave, plunging many livelihoods into poverty and hunger.

Due to the disrupted global trade, flower firms resorted to cutting down costs by substantially reducing workers' salaries and wages, minimizing on fertilizer application, diverting capital meant for investment to cushion the business, suspending plans to upgrade farm systems and equipment while postponing infrastructural and technological expansion. Further, haulage cost spiked from Ksh 140 per kg to Ksh 317 per kg, resulting in increased production costs.

Kenya's Floriculture Sector Performance Pre- and amid-COVID-19

The flower industry has been a major source of employment, with its total workforce in 2020

estimated to be about 150,000 direct workers, excluding seasonal and casual workers (Kenya Flower Council, 2020). Moreover, women account for 75 per cent total employment in the overall floriculture sector, where 66 per cent are permanent while 34 per cent are seasonal and casual workers (UNCTAD, 2017; Dolan et al., 2002). Similarly, there are about 500,000 indirect jobs created while at least 2 million persons are involved in forward and backward linkages associated to trade, such as supplies of equipment, chemicals, fertilizers, transport and middlemen. Favourable climatic conditions such as maximum hours of sunlight reduce energy costs for heating the green houses throughout the year due to proximity to the equator. The major flowers grown for export are the roses, carnations, alstroemeria, gypsophila and lilies.

Factors such as a productive workforce and Kenya's global positioning have attracted investors into the sector, which has a projected average growth of 5 per cent annually.

According to the Kenya National Bureau of Statistics, there has been a reduction in quantities of cut flowers exported for year 2020 compared to 2019. Table 4 indicates a drop in export volumes for March 2019, which recorded 16,463 metric tonnes compared to 10,438 metric tonnes in 2020. Data from KNBS relays the poor performance in cut flower exports within the subsequent months of 2020 compared to 2019.

However, from May 2020, there had been a record increase within the year as performance shot up to at least by 28 per cent, with the quantities of cut flowers rising to 10,215 metric tonnes from 7,989 metric tonnes in April 2020 (KNBS, 2020).

The Kenya Flower Council projected that despite the growth in exports, it would take at least one year for the sector to recover from losses.

After the lifting of the ban on international flights by the government in June 2020, export orders rose to 69 per cent relative to the pre-COVID level demand (Figure 3). Further, there was increased export demand at 81 per cent in July 2020, and these order levels have remained at above 80 per cent in the subsequent months up to January 2021, according to a survey done by the Central Bank of Kenya. This increase has been attributed to less stringent measures than those imposed at the beginning of the lockdowns, and increased

Table 4: Kenyan cut flowers quantities and value for the years 2019 and 2020

Cut Flowers				
Months	2019		2020	
	Quantity (metric tonnes)	Value (Ksh million)	Quantity (metric tonnes)	Value (Ksh million)
January	15,585.32	9,939.87	14,641.68	12,601.46
February	17,865.75	10,914.69	17,561.80	11,906.32
March	16,463.44	8,861.73	10,438.01	13,986.50
April	15,581.04	9,960.00	7,989.41	8,608.37
May	15,337.77	9,384.86	10,215.07	6,254.05
June	11,744.03	6,137.83	9,373.96	5,355.97
July	11,074.20	6,187.88	10,928.54	7,154.44
August	12,599.63	7,818.28	11,497.87	7,973.91
September	14,155.64	6,611.52	12,878.04	10,508.44
October	15,105.53	7,913.55	14,480.22	7,473.06
November	15,365.86	8,575.51	12,873.18	10,253.09
December	12,841.07	11,836.04		
Total	173,719.30	104,141.75	132,877.69	102,075.40

Source: Kenya National Bureau of Statistics

space on cargo planes. Additionally, flower farms recalled at least 90 per cent of their workers, thus increasing the total workforce to 113 per cent as at January 2021 in anticipation of the January to May peak season (Central Bank of Kenya, 2020)

Current Technological Adaptations within Kenya's Flower Sector

Mulangu (2017) in his study adopted a structured survey design to map out the competitiveness and technological capabilities of Kenyan flower firms. His works revealed that most flower firms had medium technological capabilities due to the product and production processes' tech intensities. According to Jin and Von Zedtwitz (2008), technological capability refers to the efficient utilization of technical equipment, skills and competency in productive enterprises.

These medium technological capabilities include fertigation system, pre-cooling, cold storage facilities, grading, wetland for water treatment and fertilizer recycling system to prevent wastage and refrigerated technologies. Additionally, about 67 per cent of flower firms use drip irrigation system that feed water to each plant, thus directly minimizing wastage, while others use overhead irrigation (Mulangu, 2017). High end greenhouses fitted with window openings are used by only 30

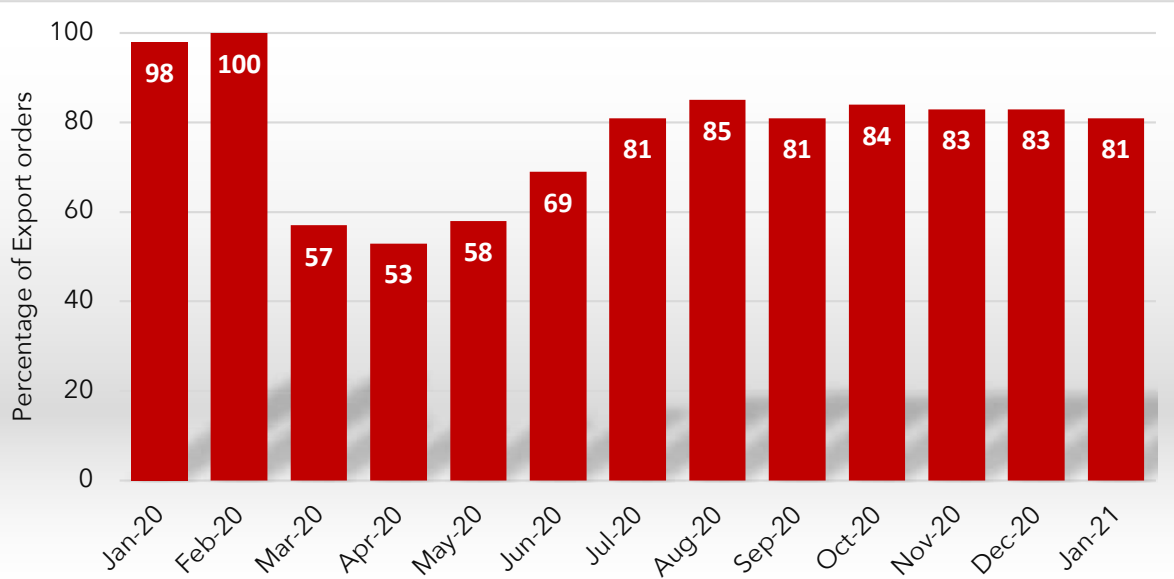
per cent of the firms while 22 per cent use shading nets. Other technological adaptations include solar energy heating and electrification. Artificial lighting for day length are among the technologies adopted.

The resultant effects include a high number of export days per week to mostly the Dutch auction market, production of large roses that attract a premium and quality cut flowers of wide varieties hence low rejection rates of about 7 per cent. In this regard, it was found that firms with more aggregate capabilities are correlated with higher levels of exports, which was what most firm managers sought after.

Such technological advancement in Kenya has aided in maintaining its dominant position in global flower trade as this ensures the flowers have a shorter breeding time, and better quality breeds that would attract higher prices thus better export performance.

There have also been efforts put across in Research and Development to ensure transformation of the flower industry productivity. For instance, in 2016, a bio-stimulant named Hicure was tested in various greenhouses. It is proven to aid grow flowers that have longer stems, bigger bud sizes, shorter crop cycles and longer post-harvest shelf lives by

Figure 3: Monthly cut flowers export demand relative to pre-COVID orders (%)



Source: Central Bank of Kenya, 2020

overcoming crop stress during extreme heat and cold periods.

In addition, Kenya Flower Council in 2020 intimated that automation through robotics that withstand power failure to spray, detect, cultivate and arrange flowers was being adopted in the sector to ensure efficiency and increased quality products. This would address the challenges faced by flower workers who would have minimal or no exposure to corrosive chemicals used while reducing labour costs, a major expense by flower firms.

How Technological Advancement Would Improve Performance of the Flower Sector

In Kenya, due to the medium technological capabilities utilized, the highly perishable flowers could not be preserved beyond the 15-day vase-life period when the prevalent pandemic hit. This creates challenges especially given that the number of orders reduced to 3 per cent, where the rest would be dumped in pits resulting to huge losses.

Moreover, as robotics is taking roots in Kenya, it has been reported that 14 per cent of agriculture-related jobs and 34 per cent jobs in transport are at risk. As a matter of fact, three

quarters of the total workforce in the floriculture sector are women at around 82,500. According to UNCTAD (2017), females are mostly temporary workers serving in insecure jobs unlike their male counterparts whose jobs are permanent. Majority offer unskilled labour and would be easily replaced by machines during the robotics migration taking away from them their main source of employment.

In this regard, there is need to make certain that investment in equipment and resources would facilitate migration of the floriculture sector from medium technological capabilities to high tech. Consequently, key focus should be made to ensure that women are not marginalized as the Fourth Industrial Revolution such as robotics, artificial intelligence, internet of things is being incorporated within different sectors of the economy.

Room for improvement includes the adoption of cold storage facilities, thus longer shelf life for the flowers to avoid a repeat of what happened in April 2020, where more than a million stem roses were trashed due to insufficient orders.

Consideration for in-house propagation and breeding to be made as there were no local firms integrated in breeding as it is a capital-intensive

activity. There is therefore need for incentivization within the sector to allow zero-rating of industrial inputs and raw materials imported to reduce the associated cost hence breeding for more varieties which are of higher quality.

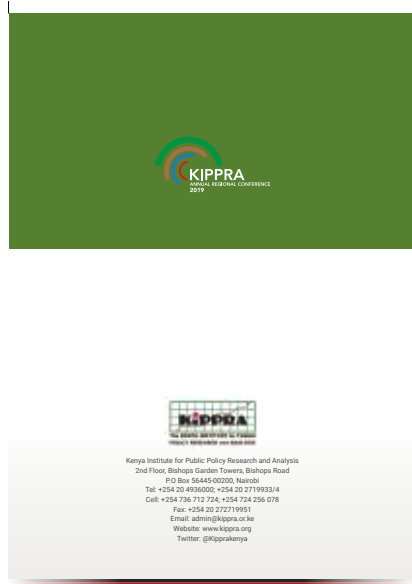
Conclusion

It is evident that technological advancements within the floriculture sector will ensure high productivity, quality of cut flowers and cost savings in the long run. Regulatory measures and institutional containment will ensure that technological changes are well taken up to allow for effective utilization of such innovative measures. In addition, innovative measures should be adopted within the sector. These include high technological adaptations such as more high-end green houses and cold storage facilities. This

would preserve the flowers longer beyond the 15-day vase-life especially in the face of economic shocks such as COVID-19.

Moreover, despite the flower farms experiencing a recovery of about 80 per cent on monthly export orders relative to pre-COVID levels, there is still potential to increase the demand to 100 per cent. By designating flower farms a Special Economic Zone, they would incorporate in their production high technological equipment aiding the shift in tech capabilities from medium to high. Additionally, lowering cost of production by subsidizing cargo services and lowering haulage costs to pre-COVID rates would redirect the savings on expenses to the initial pre-COVID plans of upgrading farm systems and equipment, and infrastructural and technological expansion.

New Publications





A. NATIONAL ASSEMBLY BILLS

- 1. Pharmacy and Poisons (Amendment) Bill, 2021** was gazetted for introduction into the National Assembly on 15th January 2021. The Principal object of the Bill is to amend the Pharmacy and Poisons Act to prohibit the sale or dispensing of medicine without a written prescription from a registered health practitioner. This is aimed at safeguarding the health of all Kenyans and encourage them to always seek medical attention from qualified health practitioners, notwithstanding that an ailment may be considered as minor.
- 2. Health Laws (Amendment) Bill, 2021** was gazetted for introduction into the National Assembly on 1st February 2021. The Bill seeks to make wide ranging amendments to various health-related statutes on matters relating to health policy to improve efficiency, service delivery, realization of the Universal Health Coverage and the “Big Four” agenda, in line with the Constitution, the Health Act, 2017, the Mwangozo Code of Governance for State Corporations and other applicable laws. It proposes amendments to the Pharmacy and Poisons Act, Mental Health Act, Medical Practitioners and Dentists Act, Nurses Act, Kenya Medical Training College Act, National Hospital Insurance Fund Act, Medical Laboratory Technicians and Technologists Act, Tobacco Control Act, Nutritionists and Dieticians Act, Cancer Prevention and Control Act, Public Health Officers (Training, Registration and Licensing) Act, Counsellors and Psychologists Act, Physiotherapists Act, Health Records and Information Managers Act, Clinical Officers (Training, Registration and Licensing) Act and the Health Act.
- 3. Landlord and Tenant Bill, 2021** was gazetted for introduction into the National Assembly on 12th February 2021. Its principal object is to repeal the Distress for Rent Act (Cap 293), Rent Restriction Act (Cap 296) and the Landlord and Tenant (Shops, Hotels and Catering Establishments) Act (Cap 301). The Bill seeks to introduce a legal framework which balances the interests of landlords and tenants in a free market economy by ensuring that landlords earn reasonable income from their investment in housing and also protects the tenant. It consolidates the laws relating to renting of business and residential premises and seeks to regulate the relationship between the landlord and tenant.
- 4. National Government Constituencies Development Fund (Amendment) Bill, 2021** was gazetted for introduction into the National Assembly on 23rd February 2021. The Bill seeks to amend the National Government Constituencies and Development Fund Act, 2015 to provide for the opening and operating of constituency accounts to facilitate third party transactions. The proposed amendment will facilitate timely and efficient disbursement of funds to constituencies and establish structures for the efficient and prudent management of the Fund.



5. **The Public Private Partnerships Bill, 2021** was gazetted for introduction into the National Assembly on 26th February 2021. The Bill seeks to provide for the participation of the private sector in the financing, construction, development, operation or maintenance of infrastructure or development projects through public private partnerships; to streamline the regulatory framework for public private partnerships; to repeal the Public Private Partnerships Act, 2013; and for connected purposes.
6. **Division of Revenue Bill, 2021** was gazetted for introduction into the National Assembly on 8th March 2021. The Bill seeks to provide for the equitable division of revenue raised nationally among the national and county levels of government as required by Article 218 of the Constitution to facilitate the proper functioning of county governments and to ensure continuity of county services.
7. **Foreign Service Bill, 2021** was gazetted for introduction into the National Assembly on 8th March 2021. The Bill seeks to provide for the establishment, management, administration, accountability and functioning of a professional foreign service of the Republic of Kenya and for connected purposes.
8. **Supplementary Appropriation Bill, 2021** was gazetted for introduction into the National Assembly on 22nd March 2021. The Bill makes provision for giving statutory sanction for public expenditure for the year ending on 30th June 2021 on the basis of Supplementary Estimates for the financial year 2020/2021 and for the appropriation of those amounts.



B. SENATE BILLS

1. **The Startup Bill, 2021** was gazetted for introduction into the Senate on 3rd February 2021. The Bill seeks to provide a legislative framework — (a) that fosters a culture of innovative thinking and entrepreneurship; (b) for the registration of startups and the linkage of such startups with financial institutions, the private sector research institutions and such other institutions at the National and County level of government; (c) to facilitate investment in and the provision of fiscal and non-fiscal support to startups in Kenya; (d) that promotes an enabling environment for the establishment, development, conduct of business and regulation of startups; (e) for the establishment of incubation facilities at the National and County levels of government and environment that promotes the establishment of startups; and (f) for the monitoring and evaluation of the legal and regulatory framework and the mechanisms put in place to encourage the development of startups.
2. **The County Statistics Bill, 2021** was gazetted for introduction into the Senate on 10th February 2021. This Bill seeks to establish a county statistical system that will enable evidence-based county planning for the development of counties and to measure the gains made by the county governments implementation of their policies.
3. **The County Vocational Education and Training Bill, 2021** was gazetted for introduction into the Senate on 8th March 2021. This Bill seeks to put in place a legal framework to govern the establishment and management of vocational education and training with the county. One of the functional areas of county governments as provided for under Part 2 of the Fourth Schedule to the Constitution relates to village polytechnics and homecraft centres.
4. **The Basic Education (Amendment) Bill, 2021** was gazetted for introduction into the Senate on 8th March 2021. This Bill seeks to amend the Basic Education Act to ensure that school going children in Kenya are provided with milk. Through this amendment, the National government shall be required through the respective County Directors of Education to supply milk to all pupils in Kenya.
5. **The Street Vendors (Protection of Livelihood) Bill, 2021** was gazetted for introduction into the Senate on 8th March 2021. This Bill seeks to provide a framework to regulate the business of street vending in the country. Small scale trade contributes significantly to the growth of trade in the country. Currently, there is no legal framework governing the business of street vending, thus the challenges being experience by both the street vendors and the county governments



in undertaking of the business. The regulation of the trade will therefore ensure that street vendors are able to transact business in favourable conditions.

6. **The Pandemic Response and Management Bill, 2021** was gazetted for introduction into the Senate on 8th March 2021. This Bill seeks to provide a framework for the effective response to and management of a pandemic to prevent the occurrence or spread of a pandemic whenever it arises. It also seeks to provide measures to mitigate against the effects of the pandemic and provide a mechanism to cushion those that may be adversely affected by the pandemic.



Kenya-USA FTA agreement

Kenya and United States are set to resume talks on the Kenya-US FTA agreement after a four-month pause following the US presidential elections in November 2020. The negotiations between the two countries were launched on 8th July 2020, months after President Uhuru Kenyatta and former President Donald Trump made an announcement on negotiations for FTA following the expiry of the African Growth Opportunity Act in 2025, which shall mean Kenyan products will fetch duty and quota to enter the US market as the country has been classified as a low-middle income

country surrounded by least developed countries who will continue accessing the market duty and quota free. Successful trade talks between Nairobi and Washington will be the basis for trade deals between Sub-Saharan Africa and the US.



Kenya -UK trade agreement

Kenya Parliament ratified the Kenya-UK trade agreement on 9th March 2021, enhancing the avenues for free access of local products to the UK. Ratification of the Kenya-UK trade agreement will see the 10 per cent duty Kenya charges on intermediate goods start reducing after seven years, resulting in its abolishment eight years later. The country will start phasing down the duty on finished products (currently billed from 25%) after 12 years, leading to its elimination 13 years later. The National Assembly Trade Committee chairman, Adan Haji, said that the agreement will support

Kenyans working in various economic sectors by maintaining tariff-free market access to the UK. “The Kenya-UK EPA will not only benefit farmers but also largely shield the economy from losing the over Ksh 40 billion market in the UK.





East African Community Monetary Institute



The East African Community Monetary Institute will start operations in July 2021, a transitional mechanism for the community's Central Bank expected to be in place by 2024. The institution is expected to carry the work in preparation for the creation of the community's Monetary Union envisaged in the EAC Monetary Union Protocol. The body established to steer Community's economic union is set to give

way for a political federation, the highest body of the East African Community in accordance with the 1999 Treaty Establishing the East African Community. For the union to be established, macroeconomic convergence criteria, and institutions to support the monetary union must be established, and policies and regulatory frameworks harmonized. The other three institutions of the community include the EAC Financial Services Commission, the EAC Surveillance, Compliance and Enforcement Commission and the EAC Statistics Commission. Rwanda has expressed interest to host the institution, although a final decision has not been set.

East African Community Heads of States 21st Ordinary Meeting

The East African Community Heads of States held the 21st Ordinary meeting on 27th February 2021 after the summit was postponed twice with the original meeting scheduled on 30th November 2021. The meeting was attended by five heads of State, with the Republic of Tanzania sending Her Excellency Samia Suluhu Hassan to represent President Dr John Pombe Magufuli. Among the agenda issues was the status of the study on the modalities of including French as a language of the community and a report on the roadmap for acceleration of integration of the Republic of South Sudan into the EAC. On admission of the Federal Republic of Somalia into the EAC, the Council was directed to follow up on the verification exercise. On admission of the Republic of the Democratic Republic of the Congo to join EAC, the Council was directed to expeditiously undertake a verification mission in accordance with the EAC procedure for admission of new members. On appointments that were pending, the summit appointed Dr Peter Mathuki of Kenya as the new Secretary General of the community for the next five years term, which is non-renewable. The summit appointed judges to the East African Court of Justice and resolved that the Republic of Kenya takes the office as the new chairperson of the community.



A. Demand-Driven Projects

A market and advocacy analysis of various core products in Eastern and Central Africa

KIPPRA is undertaking a consultancy study for Fairtrade Africa, which is an independent non-profit organization representing members who are certified producers in Africa with over 1,083,139 members across 28 countries in Africa. The main purpose of this study is to identify and document country and regional level advocacy and policy that influence priorities for Fairtrade core products such as coffee in Kenya, Uganda, Rwanda, Tanzania and Ethiopia; Tea in Kenya, Tanzania, Rwanda and Uganda and Flowers in Kenya, Uganda and Ethiopia. The goal is to provide Fairtrade Africa with the best practices that have been proved to produce best results locally and globally with an aim to accelerate delivery of producer support services and advocacy interventions for socio-economic development in East and Central Africa Network (ECAN) region.

Kenya National Quality Infrastructure Policy

KIPPRA is supporting development of a Kenya National Quality Infrastructure Policy for State Department for Industrialization, Ministry of Industrialization, Trade and Enterprise Development. It is driven by the need for a policy governing the quality infrastructure ecosystem in the country to further support the ongoing Kenya-US Free Trade Agreement (FTA) and operationalization of the African Continental Free Trade Area (AfCFTA). Once completed, the policy will address challenges that undermine products destined for the Kenyan market or manufactured locally. Some of the major challenges that the policy seeks to cure include but not limited to conflicting or inexistent legislations and lack of coordination and synergies between national quality infrastructure institutions, thereby leading to time lag in sharing of technical information with respect to technical regulations and standards, overlaps across agencies and Ministries involved in National Quality Infrastructure implementation, lengthy and costly transaction times, conflict, inefficiencies and waste of resources.

Assessment of Structures and Profitability of Milk Distribution and Retailing in Kenya

Kenya Dairy Board has commissioned KIPPRA to undertake an Assessment of Structures and Profitability of Milk Distribution and Retailing in Kenya. The study seeks to identify structures (pathways) and profitability margins for the various stakeholders involved in distribution and retailing of milk in Kenya. The main objective is to assess the structures and profitability in distribution and retailing of processed milk in Kenya. Additionally, the study will cover the distribution and retailing network between the factory and presentation of products to the consumer at retail level. This will cover UHT and pasteurized milk in major urban centres of Nairobi, Mombasa, Nakuru, Kisumu and Eldoret.



Designing Development of an Integrated Demand Forecasting Tool for Petroleum Products

KIPPRA is supporting the development of an integrated demand-forecasting tool for petroleum products for Energy and Petroleum Regulatory Authority (EPRA). The tool will be expected to forecast the consumption of regulated petroleum products in Kenya in the short and long-term, including that of Liquefied Petroleum Gas (LPG). The oil price forecasts will play an important role in assessing the future developments of pipelines, storage facilities, common user petroleum and gas facilities, among others, and also other economic activities in Kenya and its trading partners, with implications for country's terms of trade.

Kenya National Leather Policy

KIPPRA is supporting the Kenya Leather Development Council (KLDC) and the Ministry of Agriculture, Livestock, Fisheries and Cooperatives to develop the first Kenya National Leather Policy, now ready for validation by stakeholders. The formulation of the policy is evidence-based, including review of past and existing interventions to appreciate historical development of the sector with the aim of identifying constraints and opportunities. Insights to inform the policy are also drawn from players, and leather experts. The policy process was also informed by analysis of the sector relevant data and review of experiences from other countries that have successfully transformed the leather sector into a major source of employment, exports, and income generation. The analysis of policy actors and their roles will also guide in identifying constraints and opportunities, and clear responsibilities for implementation of the policy interventions once its approved. This policy is critical in informing the realization of Kenya's Vision 2030 and the "Big Four" agenda, which aims to increase Kenya's manufacturing contribution to GDP from 9.2 per cent in 2016 to 15 per cent in 2022 with focus on sectors such as textiles and apparel, leather processing and construction materials.



B. Collaborative Projects

Children Sensitive Planning and Budgeting, Public Finance for Children (PF4C): From Evidence to Policy Project

Since the inception of the UNICEF supported Child Sensitive Planning and Budgeting programme in 2017, the Institute has produced various outputs. These include training of trainers, training of county staff, and dissemination of county budget briefs and county poverty profiles. The purpose of PFM4C From evidence to policy is to offer: (1) Technical assistance to county governments to implement recommendations of the budget briefs, Public Expenditure and Financial Accountability (PEFA) and poverty profiles for improved service delivery; (2) Transitioning UNICEF County level support to be fully reflected on plans and budgets. The programme is being implemented under the Joint Devolution Programme (JDP) support for counties and through the National Level activities that will impact all the 47 counties and relevant child sensitive sectors. The focus sectors include: 1) National Public Finance Management; 2) Health; 3) Education; 4) Water sanitation and Hygiene (WASH); 5) Child Protection; 6) Social protection; 7) Nutrition.

The Domestic Savings Shortfall in Sub-Saharan Africa: What Can Be Done About It?

KIPPRA in collaboration with UNU-WIDER is working on a book on savings titled “The Domestic Savings Shortfall in Sub-Saharan Africa: What Can Be Done About It?” This is motivated by the need to increase domestic savings rates in Sub-Saharan Africa for economic growth to be realized. The book intends to close a gap in knowledge about: drivers of domestic saving rates in Sub-Saharan Africa; whether alternative approaches, such as pension funds or fintech, could provide new solutions to increase domestic savings; and lessons learnt from the experiences so far in different countries in Sub-Saharan Africa and other regions that have been more successful in raising savings rates. The findings of the research will be in tandem to the Addis Ababa action agenda of the United Nations on financing for development, which provides a new global framework for financing sustainable development by aligning all financing flows and policies with economic, social and environmental priorities.



Virtual Launch of 2020 Global Go to Think Tank Index Report, 29th January, 2021

The Kenya Institute for Public Policy Research and Analysis (KIPPRA) has been ranked second top think tank in Sub-Saharan Africa by the Global Go-To Think Tank Index Report 2020. The report is an annual document produced by the Think Tank and Civil Societies Programme (TTSCP) of the Lauder Institute at the University of Pennsylvania. The index ranks the world's leading Think Tanks in a variety of categories. TTCSP's key goal is to increase the profile and performance of think tanks and raise public awareness of the important role think tanks play in governments and civil societies around the world. Acknowledging the international recognition, KIPPRA Executive Director, Dr Rose Ngugi, thanked the board and staff for the exemplary work they continue to do to achieve the Institute's mandate. "We are very proud of this recognition and we remain committed to our vision: an international centre of excellence in public policy research and analysis," said Dr Ngugi. Among the categories that contributed to KIPPRA's favourable ranking include: Think tanks with the best impact on public policy, think tanks with outstanding policy-oriented research programmes, best think tank conference, think tank with the best external relations/public engagement, best government-affiliated and best use of social media and networks. In the Sub-Saharan Africa category, KIPPRA came second after the African Centre for the Constructive Resolution of Disputes (ACCORD) based in South Africa. Other Kenyan think tanks that made it to the top ten are: The Institute of Economic Affairs (IEA) (Kenya) and African Economic Research Consortium (AERC) (Kenya). Out of 679 think tanks in Sub-Saharan Africa, only 92 were ranked in the report. The leading think tanks in the report are Brookings Institution in the US and Japan Institute of International Affairs. The Institute launched the report virtually on 29th January 2021. The event was attended by KIPPRA Executive Director Dr Rose Ngugi, KIPPRA Staff and representatives of 254 Youth Policy Café. The theme of this year's report is 'why think tanks and policy advice will still matter in 2040'.

Policy Seminar Intellectual Property & MSMEs: Taking your Ideas to Market (4th March 2020)

The Kenya Institute for Public Policy Research and Analysis (KIPPRA) held a virtual policy seminar titled IP & MSMEs: Taking your ideas to the market on 4th March 2020 to initiate discussions leading towards World Intellectual Property (IP) Day to be commemorated on 26th April 2021. Kenya's Vision 2030 envisions a knowledge-led globally competitive and prosperous economy by the year 2030. According to the Third Medium-Term Plan 2018-2022 on implementation of the Kenya Vision 2030, entrepreneurship is to be achieved through promotion of generation and utilization of knowledge. From a policy perspective, therefore, IP is critical for entrepreneurship. The agenda of the policy seminar was to illuminate some of the challenges or obstacles Kenyan entrepreneurs experience, practically, in "taking ideas to market thus inform implementation of this policy priority. KIPPRA's Anne Gitonga made a presentation on Kenya's policy and institutional framework. Dr Tonny Omwansa, the CEO of Kenya National Innovation Agency



(KENIA) presented on the role of KENIA in facilitating innovation and Dr George Kosimbei - Director in the Directorate of Innovation Incubation and University Industry Linkages, Kenyatta University, provided context from the business point of view of the challenges experienced by innovators from idea to market.

KIPPRA Sensitizes University of Nairobi Students on Public Policy Making Process, 4th-5th March 2021

The Kenya Institute for Public Policy Research and Analysis (KIPPRA) organized a two-day KIPPRA Mentorship Programme for Universities (KMPUs) event from 4th to 5th March 2021 at the University of Nairobi Main Campus. The event was graced by KIPPRA Executive Director Dr Rose Ngugi, KIPPRA Board Member Dr Fred Simiyu and Mr Johnson Kinyua, Dean of Students of University of Nairobi who represented the Vice Chancellor. The programme aimed at sensitizing students on Kenya's development agenda and the public policy making process. Moreover, the programme is also meant to support researchers in universities to prioritize their research so that they can contribute to emerging policy issues.

The students were briefed on a range of issues touching on government opportunities for youth empowerment, policy research issues in the "Big Four" agenda and national values and principles of governance. KIPPRA partnered with various institutions to deliver the mentorship programme. They are: the Vision 2030 Delivery Secretariat, Youth Development Fund, Directorate of National Cohesion and Values, National Youth Council, SME Support Centre, Kenya Accountants and Secretaries National Examinations Board (KASNEB) and Kenya Industrial Property Institute (KIPI). Speaking at the event, KIPPRA Executive Director, Dr Rose Ngugi, reiterated the importance of university research in the achievement of national development goals. The KMPUs has so far been convened in nine universities and aims to reach more in future. The event concluded with awarding of students who had participated in writing essays on the "Big Four" agenda.



KIPPRA EVENTS



KIPPRA Executive Director Dr Rose Ngugi (sixth right) and KIPPRA Board Member Dr Fred Simiyu (third left) pose for a group photo at the award ceremony



KIPPRA Executive Director Dr Rose Ngugi (right) receives gift from University of Nairobi Vice-Chancellor Prof Stephen Gitahi Kiama (left) during KMPUs event at University of Nairobi



Participants follow the proceedings of the KMPUs event

KIPPRA EVENTS



KIPPRA Day, 12th March, 2021

The long-awaited KIPPRA Day finally happened on 12th March 2021 at the Bomas of Kenya, Nairobi. The colourful day began with a musical procession from the Kenya Wildlife Service headquarters along Langáta Road to the venue, led by the Kenya Prisons Band. Board and staff, clad in their beautiful KIPPRA-branded Ankara shirts and blouses, accompanied by a few guests, took the three-kilometre walk in zest. Those who did not manage to join the procession waited at the venue where the event kicked off immediately afterwards.

The day was organized to enable KIPPRA showcase its products and services and engage with stakeholders with a view to obtaining feedback to improve. Another important activity on KIPPRA Day was the launch of the KIPPRA Public Policy Repository, an online platform where the public can access all national and county government policy documents and KIPPRA research outputs. The event was graced by the Chief Administrative Secretary, The National Treasury and Planning, Hon. Eric Wafukho, KIPPRA board members led by Board Chairperson Dr Linda Musumba, KIPPRA Executive Director Dr Rose Ngugi, Micro and Small Enterprises Authority CEO Mr Henry Rithaa, African Economic Research Consortium Executive Director Prof. Njuguna Ndung'u and Kenya Investment Authority General Manager, Investment Promotion Mr Pius Rotich. The event also brought together other stakeholders from diverse fields.

The highlight of the day was the launch of the Public Policy Repository, which saw Ms Winnie Ngyu, Head of Library Services, take the guests through the online platform, highlighting some of the national and county governments policy documents and KIPPRA research outputs in the repository. The public policy repository seeks to make government policy documents more visible on the web, reaching a wider readership via free online access; complement the traditional government publishing channels and provide a permanent record of policy documents since independence.

The Cabinet Secretary, The National Treasury and Planning Hon. Amb. Ukur Yatani was represented by the Hon. Wafukho who delivered his speech, which highlighted the importance of the Institute's work in the delivery of the Government's development agenda. KIPPRA Board Chairperson Dr Linda Musumba, in her address, thanked the Government for supporting the Institute to deliver its mandate. KIPPRA Executive Director Dr Rose Ngugi thanked all those who attended the event and reiterated the Institute's commitment to undertake evidence-based public policy research and analysis. The event also included presentations from the alumni of the KIPPRA Mentorship Programme for Universities (KMPUs) who had been invited. They included poems, spoken word and policy debates on the "Big Four" agenda. The event concluded with the awarding of former a KIPPRA staff member, Ms Everlyne Onyango, who recently retired.



KIPPRA EVENTS



The KENYA INSTITUTE for PUBLIC
POLICY RESEARCH and ANALYSIS



CAS The National Treasury and Planning, KIPPRA Board Members and Executive Director pose for a group photo after the launch of Public Policy Repository



CAS, The National Treasury and Planning. Hon. Eric Wafukho Simiyu gives his remarks at KIPPRA Day



Participants follow the proceedings of KIPPRA Day

KIPPRA EVENTS



KIPPRA Holds a Roundtable Breakfast Meeting to Discuss Implications of Africa Continental Free Trade Area (AfCFTA), 24th February, 2021

KIPPRA held a roundtable breakfast meeting on 24th February 2021 with stakeholders from public and private institutions to discuss the implications of Africa Continental Free Trade Area (AfCFTA) on Kenya. The roundtable brought together representatives from ICT Authority, Kenya Association of Manufacturers (KAM), National Council for Persons with Disability (NCPWDs) and The Association of Professional Societies in Kenya (APSEA). The event was also graced by KIPPRA Executive Director Dr Rose Ngugi and ICT Authority CEO Dr Katherine Getao. The objective of the roundtable was to gather stakeholder views on assessment of revenue, trade and welfare implications of AfCFTA on Kenya, establishment of the effect of digitization on trade under AfCFTA for Kenya and analysis of AfCFTA as an initiative for industrialization and economic development. The roundtable was concluded after successful engagement with stakeholders.



ICT Authority CEO Dr Katherine Getao addresses participants at AfCFTA round table



KIPPRA Executive Director Dr Rose Ngugi addresses participants at AfCFTA round table

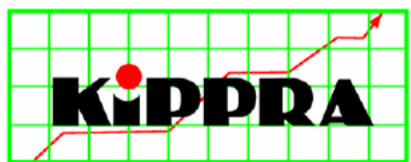
KIPPRA EVENTS



KIPPRA Takes Mentorship Programme to Kisii University, 18th -19th February,2021

KIPPRA organized a two-day KIPPRA Mentorship Programme for Universities (KMPUs) event from 18th to 19th February 2021 at Kisii University Main Campus. The event aimed at sensitizing students on Kenya's development agenda and the public policy making process. Moreover, the programme is also meant to support researchers in universities to prioritize their research so that they can contribute to emerging policy issues. The students were briefed on a range of issues touching on government opportunities for youth empowerment, policy research issues in the Big Four agenda and national values and principles of governance. Students who had participated in writing essays on the Big Four agenda demonstrated their understanding of the four pillars of the agenda– food security and nutrition, affordable universal health care, affordable housing, and enhanced manufacturing – through a discussion panel. The event graced by KIPPRA Executive Director Dr Rose Ngugi, KIPPRA Board Member Ms Rose Rono and Kisii University Vice Chancellor Prof. John Akama. KIPPRA partnered with various institutions to deliver the mentorship programme. They are: the Vision 2030 Delivery Secretariat, Youth Development Fund, Directorate of National Cohesion and Values, National Youth Council, SME Support Centre, and Kenya Accountants and Secretaries National Examinations Board (KASNEB). The KMPUs has so far been convened in eight (8) universities and aims to reach more in future. Speaking at the event, KIPPRA Executive Director Dr Rose Ngugi reiterated the importance of university research in the achievement of the national development goals. Kisii University Vice Chancellor, Prof. John Akama, on his part emphasized the importance of incorporating research and evidence in development. The Institute also signed a memorandum of understanding with Kisii University to promote collaboration and partnership between the two institutions. The event was concluded with the awarding of students who participated in essay writing on the “Big Four” agenda.

KIPPRA EVENTS



The KENYA INSTITUTE for PUBLIC
POLICY RESEARCH and ANALYSIS



A Panel Discussion on Big 4 Agenda by Kisii University Students



KIPPRA Executive Director exchanges signed MoU with Kisii University VC Prof John Akama



Students receive certificates from KIPPRA Executive Director, Dr Rose Ngugi, during KMPUs event at Kisii University



ABOUT KIPPRA

The Kenya Institute for Public Policy Research and Analysis (KIPPRA) is an autonomous institute whose primary mission is to conduct public policy research leading to policy advice. KIPPRA's mission is to produce consistently high-quality analysis of key issues of public policy and to contribute to the achievement of national long-term development objectives by positively influencing the decision making process. These goals are met through effective dissemination of recommendations resulting from analysis and by training policy analysts in the public and private sectors. KIPPRA therefore produces a body of well-researched and documented information on public policy, and in the process assists in formulating long-term strategic perspectives. KIPPRA serves as a centralized source from which the Government and the private sector may obtain information and advice on public policy issues.

KIPPRA acknowledges generous support from the Government of Kenya and the Think Tank Initiative (TTI) of IDRC. The TTI is a collaborative initiative of Hewlett Foundation, International Development Research Centre (IDRC) and other partners. Other organizations are welcome to contribute to KIPPRA research either as core support, or support to specific projects, by contacting the Executive Director, KIPPRA.

Send to us your comments on the articles published in this newsletter and any other aspects that may help to make the *KIPPRA Policy Monitor* useful to you. This may include policy issues you would like KIPPRA to prioritize.



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