The Corvus

The Rebirth of Medical Technology

Cybersecurity in the age of Covid-19

The Coming of Age of the Nigerian Logistics Industry

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Foreword

Segun Agbaje

It is my pleasure to introduce you to the 6th edition of The Corvus, a financial and economic publication of Guaranty Trust Bank.

The global Covid-19 pandemic united the world in a struggle for survival on a scale—to use what is now a cliche—unprecedented. According to the European Centre for Disease Prevention and Control (ECDC), over 171 million people globally have contracted Covid-19, with over 3.5 million fatalities as of May 28, 2021. Most countries were unprepared for a crisis of this scale and it quickly became apparent that it is inadequate to respond to a black swan event with slow processes.

While early estimates suggested it would take years to see a vaccine, companies and governments acted quickly and efficiently to move that timeline forward. Messenger RNA (mRNA), which seemed only on the fringes of science since the late 1980s, has become the backbone of Covid-19 vaccine development. That lesson in efficiency from the healthcare sector has scaled across every aspect of the global economy. We saw an acceleration of trends as businesses evolved quickly to survive, and remote work became a reality. Endless Zoom calls talked about the new normal.

With the rollout of vaccines and easing of lockdown restrictions, this edition of the Corvus Magazine documents some of the lessons of the past 18 months as some parts of the world approach a post-Covid era. While stability has always been considered the bedrock of business survival, the ability of an organisation to renew itself in a turbulent environment has never been more critical. Businesses have demonstrated incredible resilience despite the odds.

This edition of Corvus also drives a vigorous conversation on Nigeria's population. While there are concerns about Nigeria's rapidly growing population, it may be more beneficial to consider it a productivity challenge that can be transformed into a significant economic advantage. This, of course, would only happen if legacy problems around quality education and skills acquisition are addressed.

As Nigeria's population continues to grow, it is encouraging to see that internet and smartphone penetration is increasing. The upside to increasing internet penetration is an uptick in e-commerce and for the new generation of digital natives, the internet will prove crucial and will create even more opportunities.

I am sure that you will find this edition of Corvus engaging, actionable, and insightful, and I hope you never forget that agile stays afloat when storms come.

Welcome to the 6th edition of The Corvus, a financial and economic publication of Guaranty Trust Bank plc.

Strengthening Global Supply Chains in a Post-Covid era

Abdelmuizz Bello

Despite the wake of immediate and lingering health impact and unfortunate fatalities arising from the Covid-19 pandemic, infections Despite the roll-out and administration of effective vaccines globally, governments are navigating the slippery slope of completely reopening economies and jumpstarting productive activities without spurring a new wave of the Covid-19 pandemic. While some countries have been able to kick-start economic activities without a spike in infections and fatalities, others haven't been as fortunate. Quite naturally, businesses continue to face the multiple challenges of protecting employee health and safety, contributing to the fight against the spread of the virus and safeguarding their operational viability into the future.

In the coming decades, businesses the world over will no longer be judged solely by the usual financial metrics of revenue growth, profit after taxes, market capitalization, environmental impact, innovation, goodwill, etc., but also by the resilience of their supply chain and operational networks to 'black swan' events like the current pandemic.

As the virus ravaged global economies, the role of China as a major trade partner became very evident as the second largest economy in GDP terms, China, is responsible for over 18% of Global GDP – some US$14 trillion. Consequently, the introduction of travel restrictions and movement restrictions within cities at the inception of the pandemic saw many countries witness a significant disruption within their economies as businesses shut down from lack of raw materials. Projects stalled from delays occasioned by lack of manpower and/or critical equipment that were to be supplied by Chinese companies or managed by skilled Chinese workers. This is better put in context when it is considered that more than 200 of the Fortune Global 500 firms have a presence in Wuhan; the origin of Covid-19 virus. It also explains why 31% of respondents in a recent PwC survey of business leaders in the United States identified supply chain issues, especially from China, as one of their top 3 business operation continuity concerns.

It becomes evident that most entities and consumers whose supply chains are heavily reliant on China experienced severe shocks to their supply chain that may require several quarters of readjustment.

There was a rebound in the global economy following a surge in global trade to clear out pent-up demand as a result of movement restrictions. The improvement in global trade was driven by increased confidence aided by a better understanding of Covid-19 and the discovery, production and distribution of effective vaccines to deal with it.

As businesses reopen to a new normal, corporate leaders must begin to identify deficiencies and develop robust strategies to better deal with future disruptions to their supply chain. Below, we share some thoughts that supply chain managers can consider as they review their business and take steps to reduce the vulnerability of their operations to future events:

Initiate Supply Chain Mapping

According to the American Production and Inventory Control Society (APICS), Supply Chain Mapping is essentially the act of "drawing the procedures or relationships that form an organization's business process". Supply Chain Mapping enables businesses better understand the linkages and dependencies within their operational processes; it identifies which suppliers and suppliers' locations are potentially at risk and what options exist for securing scarce resources/inventory from alternate sites. Organizations with proper supply chain mapping have better visibility into the structure of their supply chain networks and put adequate information at the disposal of management for evaluating the impact of a potential disruption within a short time frame.

Organizations that invested in mapping their supply networks were noted to have handled the pandemic better and emerged stronger than their counterparts that did not bother to make such investment. Though supply chain mapping can be resource-intensive, it is nonetheless a critical tool in planning for severe business disruptions. The Harvard Business Review highlights that "companies will discover that the value of supply chain mapping is greater than the cost and time invested in developing it".

Create Digital Supply Networks (DSNs)

Considering disruptions to Supply Chains globally, it is very important to develop and adopt the Digital Supply Networks (DSNs) model. The traditional linear supply chain model needs to be transformed into a network, where functional silos are broken down and organizations become connected to their complete supply chain network to enable end-to-end visibility, collaboration, agility, and optimization.

DSNs leverages advanced technologies including the Internet of Things (IoT),

Artificial Intelligence (AI), machine learning, advanced analytics, and 5G to design and anticipate future challenges and model appropriate responses for them. They are very critical in enabling supply chain management leaders to obtain diagnostic and predictive insights from the massive number of events occurring within their chains, helping leaders to better understand the health of their chains. These technologies are also utilized to create a digital companion to existing supply chains.

The DSN model encourages the digitization of as many processes as possible in the supply chain process which is expected to impact a company's operations positively. A 2016 Boston Consulting Group report suggested that digital supply chain technologies aid product availability and response to market disruption time by 10% and 25% respectively

relative to their counterparts without a digitized strategy.

Build Crisis Management Teams

Business leaders should use the information obtained from the digital tools described above to build their Crisis Management Team, a "Supply Chain War Room" with cross-functional representation across key departments from sales, marketing, operations, IT, logistics and finance, to track and develop a response to any crisis. Put differently, it involves developing business continuity plans primarily focused on preparing for a possible disruption in supply from manufacturing partners during a crisis.

This team will be required to regularly access and monitor global events as they occur to identify vulnerable

sectors that might be affected, which products or components are made from the identified sectors and to what extent revenue and customers will be impacted. Any notification of a situation with the remote potential to disrupt supply chains is to be escalated for further evaluation.

The team will also collaborate and communicate regularly with other cross-functional teams to develop an efficient Response Playbook in a bid to create a seamless and documented process for managing a supply chain disruptive issue end-to-end. It is also advisable for the team to hold preparedness and scenario drills involving all relevant departments as well as critical suppliers linked to the identified supply chain risk from time to time.

In addition to the above, businesses can strengthen their supply chains networks and improve business
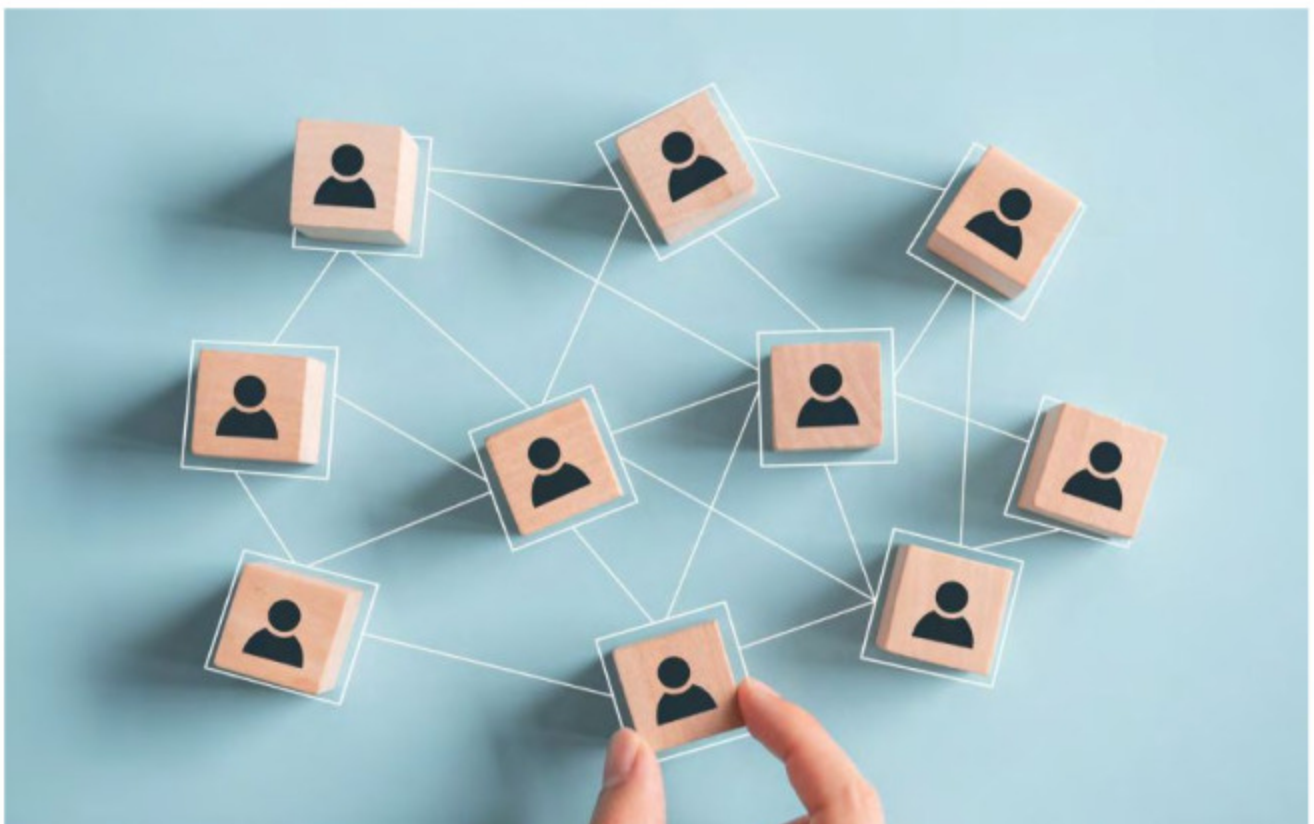
continuity and operational resilience by considering the following activities:

1. Build-in redundancy & create flexible supply chains aligning cost and efficiency

2. Develop robust and transparent supplier monitoring systems

3. Treat logistics providers as partners, and become a customer of choice to suppliers

4. Re-evaluate supply contract structures with options for shared risk & force majeure

As they strengthen the supply chain and ramp up production post-COVID, businesses have a fresh opportunity to re-evaluate their environmental management strategies and ensure it is in line with the global Environmental, Social and Corporate Governance (ESG) policies.

ESG policies in supply chain management provide a framework for environmentally friendly, socially acceptable and ethical supply chain activities in connection with procurement, sourcing and supplier relations management. The globalization of labour and the need for transparency into suppliers' activities has made ESG a major focus when developing procurement and sourcing strategies. In business performance evaluation by potential investors, environment, social, governance and sustainability concerns have become a very crucial part of the assessment process.

The goal here is to increase sustainability efforts, improve operational processes and protect the environment starting with supply chains as the most significant impacts on the environment and society from business operations start from there.

Perhaps, one of the few silver linings from the Covid-19 induced lockdowns was the positive impact on the environment as seen in the records of reduced environmental pollution levels and significant improvements in air/water quality witnessed in many countries during the period. Available data by the Proceedings of the National Academy of Sciences of the United States of America (PNAS) revealed that after accounting for meteorological variability effects, there was a marked reduction in the population-weighted concentration of ground-level nitrogen dioxide by 60%, fine particulate matter by 31%, and marginal increases in ozone by 4% in 34 countries during the lockdown date up until May 15, 2020. It is therefore important, now more than ever, that businesses reaffirm their commitments to responsible business practices by integrating sound environmental practices into their daily business operations.

By employing Environmental Supply Chain Management, businesses can engage suppliers and encourage them to employ clean environmentally friendly technologies and promoting environmental responsibility. Actions that can be taken by companies working in partnership with suppliers include:

1. Identifying sources of pollution and waste and implementing measures to prevent them

2. Improving environmental performance, extending responsibility in the supply chain

3. Encouraging suppliers to use cost-efficient cleaner production, pollution prevention, and eco-friendly technologies

These are expected to lead to strategic and continuous environmental improvements in the supply chain.

Improving the framework of Environmental Supply Chain Management will not only improve a company's environmental impact, but it also confers several business advantages including:

1. Improved business and public image

2. Reduced risk of legal non-compliance and defaults

3. The attraction of a growing number of environmentally aware customers

4. Improved productivity, efficiency, and

5. Creation of more sustainable products and revenues

The role played by successful businesses in contributing to sustainable long-term development will encourage more companies to address the environmental impacts of their supply chains.

Conclusion

The disruption to supply chains caused by the Covid-19 pandemic could last several quarters. Supply chain managers and strategists would do well to treat the impact, not as an aberration, but as an expected event in a world where political upheavals, health issues, technological disruptions, and climate change are regular occurrences. It is time to adjust companies' processes to fit this new normal.

Finally, as businesses move into recovery mode, and hopefully into a period of sustained growth, there will be a need to strengthen operational resilience. The importance of supply chain resilience and risk management is more important now than ever.

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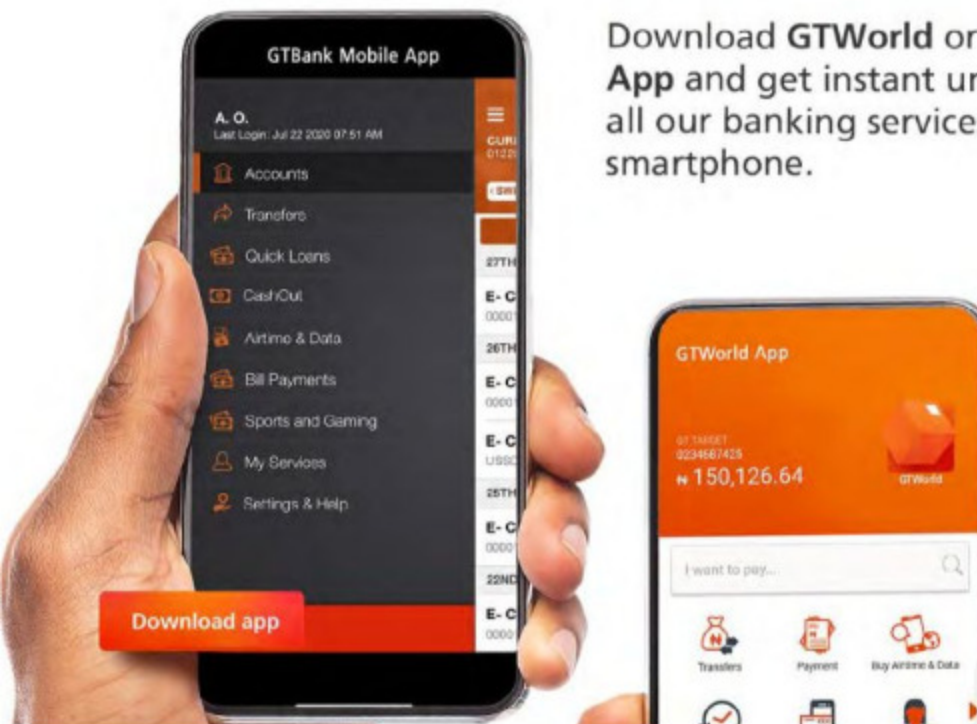
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Cybersecurity in the age of Covid-19

Chima Azubuike

According to a Clark School study at the University of Maryland, USA cyberattack occurs every 39 seconds to computers with internet access, which translates to a daily tally of about 2,244 attacks. For context, by the time you are done reading this article, there would probably have been more than 20 cyber-attacks. The effect of cyberattacks can be devastating and costly. For instance, the cyberattack on Yahoo in 2016 led to the hacking of 3 billion Yahoo accounts and precipitated a US$350mm decline in the company value the following year. In 2017, the WannaCry virus attacked 400,000 machines owned by 100,000 groups in about 150 countries with an economic loss exceeding US$4bn (Sobers, 2020). In 2020, the cost of cybercrime was expected to hit about US$5trn (Columbus, 2020) exceeding the combined annual budget of African countries over the last five years.

Institutions, private or public, are fundamentally about data gathering, processing and storage. Large amounts of sensitive data are generated on computers and other electronic devices, exchanged and transmitted within and amongst these institutions with some unfortunately making it into the wrong or unintended hands. With organizations facing increasing public pressure and regulatory oversight on the use and protection of customer data, a simple data breach could cost an organization her reputation through loss of stakeholder's trust, destruction of competitive advantage and lead to revenue loss, including penalties and lawsuits. Ensuring that data breaches do not happen, and even when they do are minimal, is the purpose of cyber-security.

Cybersecurity involves all practices, actions, technologies and processes deployed to ensure and sustain the availability, integrity and confidentiality of electronic and physical computer systems and infrastructures, and the data stored, processed and disseminated through them. Their focus is, to amongst others, prevent the most prominent cyber-attacks such as malware,

ransomware, SQL injection attacks, session hijacking and man-in-the-middle, phishing, denial of service (DoS), privileged escalations, brute force, unpatched vulnerable software attacks, credential reuse, remote code execution, etc. (Mitchell, 2019).

Cybersecurity has evolved from defending a defined perimeter to defending boundless, infinite, highly mobile and dynamic workstations. With the adoption of remote work policies, defined work perimeters have significantly blurred, reducing visibility into cyber activities and driving an unprecedented expansion of cyber failure points. While the world battles the Covid-19 pandemic, cyber vulnerabilities escalated and resulted in the emergence of the "fearware"

as people sought information (Tett, 2020 and Swinhoe, 2020).

The convergence between organizational performance, employee safety & productivity, information/data security and business continuity emerged as millions of employees leveraged enterprise virtual private networks (enterprise VPNs) to transit from localized workspaces to scaled remote and digitalized workstations. Which has effectively altered the technology playbook of most organizations.

The activation of stay-at-home and social distancing protocols triggered the adoption of remote work arrangements as financially and technically prepared enterprises

pushed to sustain business continuity and promote client/employee safety. There was widespread adoption of virtual collaboration and meeting platforms by business organizations to sustain communication, just as educational institutions evolved to the digitization of student and faculty engagements including the delivery of tuition through a suite of digital platforms. In addition, there was a significant rise in webinars and public and private stakeholder engagements through similar digital platforms. With the surge in the use of digital collaboration platforms, broadband data usage rose by over 47% as large amounts of data were pushed into relatively unsecure digital territories, establishing large numbers of potential cyber failure points (Ahmed,

2020, Roy, 2020 and Anyanwu et al, 2020). Expectedly, the numbers of cyberattacks themed attempts escalated by some 30,000% as malicious attackers took advantage of the Covid-19 pandemic (Desai, 2020; Himmelsbach, 2020; Wong, 2019 and Kaiser & Ramaswami, 2020)

As the boundary between work and private life blurred and the cost of the two most important components of remote work and digital collaboration (electricity and internet access) escalated, cloud natives conducted activities over residential-focused ISP (Internet Service Providers), unmanaged routers, printers and unofficial automation systems making eavesdropping unavoidable. Branscombe (2020) highlighted employees' preference for using their smartphones for web access during the lockdown, increasing cloud traffic from unmanaged and

unsecured devices. These events only further widened the horizons for cyber-attacks and multiplied possible failure points whilst exacerbating existing vulnerabilities. Most of these attacks expectedly take advantage of activities and events around the Covid-19 pandemic (Curry, 2020).

Reports have highlighted that Covid-19 themed cyberattacks proliferated during the pandemic, accounting for over 80% of all attacks and emanating from more than 51,000 Covid-19 themed domains. Cisco Talos Intelligence Group documents four (4) broad categories of Covid-19 themed cyberattacks: malware and phishing campaigns, health sector targeted attacks, financial fraud and disinformation. Other attacks include smishing (SMS phishing), vishing (voice phishing) and pretexting (Fruhlinger, 2020 and Branscombe, 2020).

Woollacott (2020) highlighted that opportunistic detections, impersonation, malware and URL blocking all went up by 26.3%, 30.3%, 35.16% and 55.8% respectively in the first 100 days of the Covid-19 pandemic. This underscores the urgent need to recalibrate and strengthen existing cybersecurity architectures and mindsets through investments (Mutune, 2020).

Prominent among risks associated with remote work arrangements include breaches associated with Access Authentication, use of multiple devices, increased data sharing via unsecured gateways & corridors, the proximity of IT support, Silicon-level security risk, etc. As economies and institutions re-open, proactive organizations are already assessing the probabilities and possibilities of a permanent shift to a new normal in terms of work location and are

likely to consider huge investments in remote work technologies and cloud-based collaboration tools.

Covid-19 induced digitization of work and services, as well as the harsh economic conditions associated with it, has driven many institutions into some sort of budget reassessment and adjustments. This obviously should favour investments in technology and remote work infrastructure as well as advanced cybersecurity, given the escalating cybersecurity threats. However, any budget cutback that will expose an organization to reputational damage and regulatory non-compliance might be a step in the wrong direction. The case for an increased budget for cybersecurity is premised on its potential economic, reputation/regulatory and social long-term benefits.

It is opined that additional amounts should be deployed to cloud security, data security, GDPR (General Data Protection Regulations) related consulting, employee cybersecurity awareness training and the acquisition of information security software and services, as well as advanced cybersecurity solutions (Staff, 2020 and Hospelhorn, 2020).

Covid-19 pandemic has no doubt elevated the "VUCA-riousity" of the current business environment by escalating existing and emerging cyber vulnerabilities. VUCA is a trendy managerial acronym used to describe today's chaotic, turbulent and rapidly changing business environment. This term stands for Volatility, Uncertainty, Complexity and Ambiguity. The significant rise in the adoption of cloud-based services is driving up cloud-native threats due to exponential growth in cloud traffic from unmanaged devices and unsecured networks. The ability to re-imagine and create a strong cyber-hygiene culture driven by an adequately trained workforce as well as developing an alternate business-as-usual environment (Business Continuity Plan–BCP) that minimizes productivity losses is very essential for survival (Basnayake et al, 2020).

Finally, the possibility of a "Cyber Pandemic" is a concern bearing in mind that a 21-day global cyber lockdown could cost the world more than US$1 trillion (Davide & Pipikaite, 2020). Hence, the overwhelming need for an agile BCP which should be structured to be able to turn things around rapidly, overcome financial difficulties and cope with distressing situations (Nimmo, 2020). One way of securing a company's business intelligence engine is by predicting, preparing for and preventing potential or possible business disruptions, including cyberattacks in a deterministic and pragmatic way.

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Don't leave your

Agility in Business

Mavis Opoku–Bossman

Introduction

Agility refers to the ability of an organization to renew itself - adapt, change quickly - and succeed in a rapidly changing, ambiguous, or turbulent environment. Agility is not incompatible with stability—quite the contrary; Agility requires stability for most companies. Agility thrives on two main things; dynamic capability (the ability to move fast with nimbleness, and responsiveness) and stability (a stable foundation/platform to build on). It is this stable backbone that becomes a springboard for the company, an anchor point that remains constant while a whole lot of other things change constantly. The pandemic-induced lockdown provided the rare opportunity for companies that have struggled to become dynamic and have also been on the agile journey for longer than necessary with marginal success recorded, to accelerate their transformation strategy. In a statement credited to a senior executive of a bank in the US, he said that "…at our bank, the teams and colleagues that are materially more productive and motivated during the COVID-19 crisis are those that had already been, or are now, using agile principles in the way they work."

The Gift of Crisis – Innovation

A former White House Chief of Staff and former Mayor of Chicago; Rahm Emanuel famously said "Never allow a good crisis go to waste". The gift of any crisis is often hidden in the opportunity it presents to do things once thought were impossible, therein lies innovation. Dyson Limited, a British company that manufactures household appliances, designed a new ventilator in 10 days. Alibaba and Zhongbai, a Chinese retailer, built an unmanned store for essential items and disinfectant supplies. Chick-fil-A, one of America's largest fast-food chain restaurants, developed more than a dozen changes to its drive-through process to maximize safety and efficiency in the face of skyrocketing demand for take-out food, while contactless products sitting on shelves of banks were quickly concluded and launched. These are not surprising occurrences, they reinforce the outcome of various studies on the impact of the principles and practices of agile management on companies, which showed that companies innovate quickly when they shed the constraints of bureaucracy and adopt agile methods.

Today, many companies seem to be discovering agile methodologies at breakneck speed. Some executives have confessed that the innovations their companies are creating weren't part of a strategic plan. The pandemic inspired a small group of people that spotted an urgent need, dropped lower-priority activities, broke typical bureaucratic procedures,

and transformed themselves from everyday workers to real-life corporate 'MacGyvers', surpassing expectations of themselves and their bosses in the process. In times of crisis, all the things that are difficult to address in the "normal" course of business—such as titles, committees, power structures, governance—are often open to question. Sacred cows can be attacked, third rails can be touched. This spur-of-the-moment agility is fragile, and innovation happens sporadically rather than systematically. When the emergency fades, will people typically return to traditional command-and-control innovation until the next crisis arises?? The crux of this article is to reveal how companies can maintain their agility even after the crisis is over.

Finding the Equilibrium

Imagine a spectrum which is fast, nimble and agile at one end, and stable, slow, efficient and more centralized at the other. Many large companies try to find where they want to be on the spectrum. This is a wrong way of attempting agility as it requires both flexibility and stability. The essence of true organizational agility is its ability to be both stable and dynamic. For instance, the hardware and operating system of a smartphone form a stable foundation. However, a dynamic application builds-in 'White Space' for new apps to be added, updated and deleted as requirements change and capabilities evolve. This analogy best describes an agile organization's stable backbone and dynamism to add and update as the organization responds quickly to market changes.

Agile companies design their organizations with a backbone of stable elements. Like the smartphone's hardware and operating system, these foundations are likely to endure over a reasonable period. These agile companies also have more dynamic capabilities: organizational "apps" to plug and play as new opportunities arise or unexpected challenges threaten the profit streams of the business.

A 2015 analysis of McKinsey's Organizational Health Index showed that companies with both speed and stability had a 70% chance of being ranked among the top quartile by organizational health. That's significantly higher than it found among companies focused only on one or the other. It aligns with long established views that organizational health is a predictor of strong financial performance.

An analysis by Professor Rita Gunther McGrath of Columbia Business School identified ten (10) US companies out of more than 2,300 large US companies that increased their net income by, at least, 5% annually in the ten years up to 2009. She concluded that these high-performing companies were both extremely stable (with certain organizational features that remained the same for long stretches), and rapid innovators that could adjust and readjust their resources quickly.

In what we can call the great unfreezing, many organizations, in the heat of the coronavirus crisis, have been forced to work in new ways, and they are responding. Much of this progress comes from shifts in operating models. Corporate bureaucracy has now been replaced

with clear goals, focused teams, and a rapid decision-making process. Now, as the world gradually moves into the post-COVID-19 era, leaders must commit to not rolling back on the gains of this period. The way in which they rethink their organizations will go a long way in determining their long-term competitive advantage. Specifically, they must decide who they are, how to work, and how to grow to leverage the required operating model for structure, governance and process.

Structure

Traditional hierarchies typically specify where work gets done, how performance is measured, and those responsible for awarding bonuses. Agile organizations deliberately choose the appropriate dimension of their organizational structure. This choice will dictate where individual employees work— where they are likely to receive coaching and training and where the infrastructure around their jobs will be located. Day-to-day work, performance measurement, and the determination of rewards, on the other hand, are more likely to happen in teams that cut across formal structures.

Organizational leaders are reflecting on how quicker, faster and better important decisions were made by small, nimble teams built in a hurry to deal with the COVID-19 emergencies. What companies have learned cannot be unlearned. Flatter organization that delegates decision-making to a dynamic network of teams has been found to be more effective. It is not unlikely that they are rewiring their circuits to make decisions faster, and with fewer data and certainty than before. In a world where fast beats

slow, companies that can internalize these forms of quick and effective decentralization will jump ahead of the competition.

Agile companies have learned that the stability of an organizational home is critical because it helps companies to redeploy employees in less successful cells more easily and rapidly, with little of the disruption and fear over job losses that traditionally deter and hinder change.

strong sense of identity. Leaders and employees have a shared sense of purpose and a common performance culture.

The idea behind agile governance is to establish stable and dynamic elements in making decisions which typically come in three types. Let's call big decisions with high stakes Type I; frequent decisions that require cross-unit dialogue and collaboration, Type II; and decisions that should be parsed

delegated to direct reports and to people close to the day-to-day action. This will help establish clear charters for committee participants and clarify their responsibilities to avoid overlapping roles. These companies will also make speedy decisions and adapt to changing circumstances rather than spend time in meetings sharing information through endless presentations, many dealing with issues that have already been resolved.
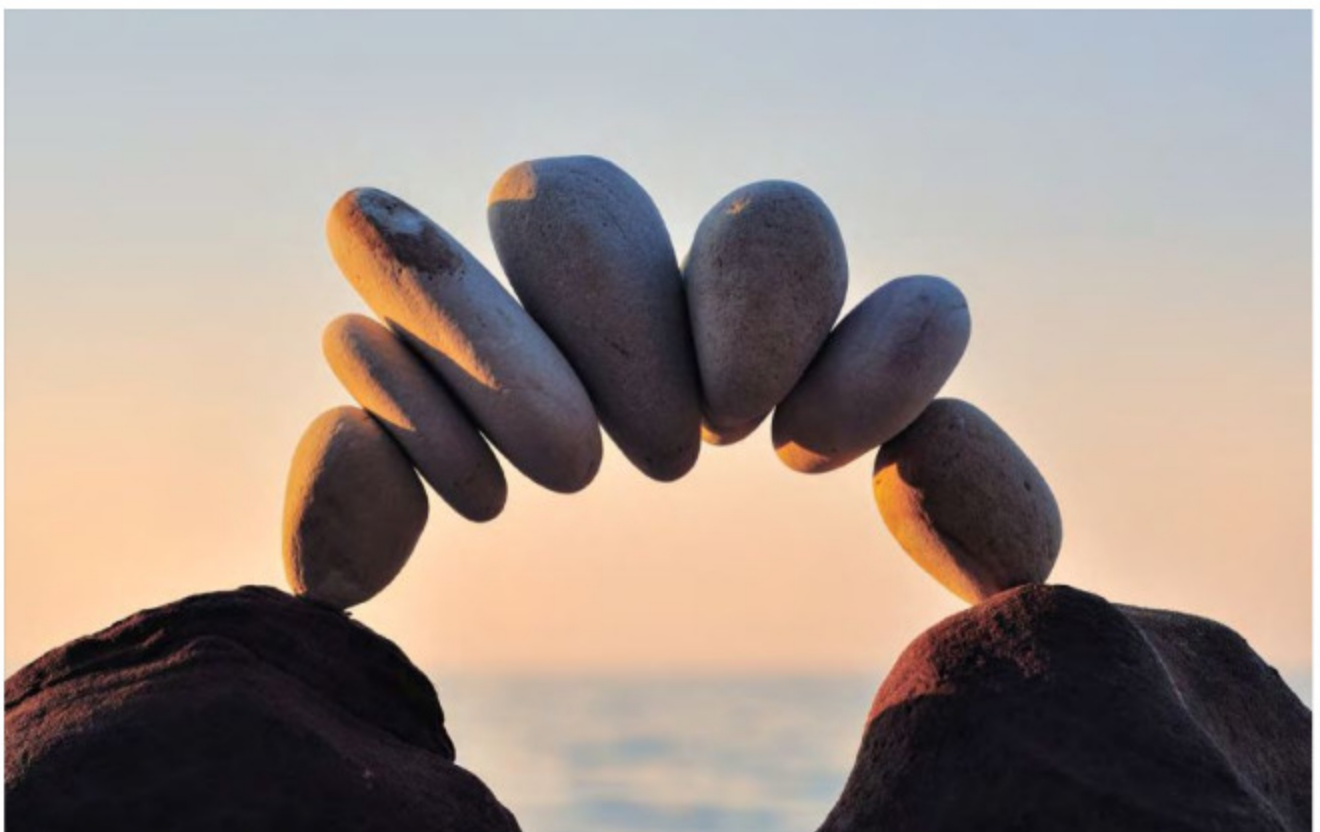

Governance

In a crisis, what matters become a lot clearer. The social contract between the employee and employer changes fundamentally as the primary focus becomes the safety of employees and communities first. A distinctive characteristic of companies that have adapted well is that they have a

into smaller ones and delegated as far down as possible, Type III. Experts have identified Type II decisions as the ones that often hinder organizational agility and if successfully addressed can appropriately define which decisions are best made in committees and which can be

Process

Most agile companies reinforce the new dynamism with a degree of stability in their structure and governance, they create a formidable backbone for key processes. These are usually signature processes, which these companies excel at and
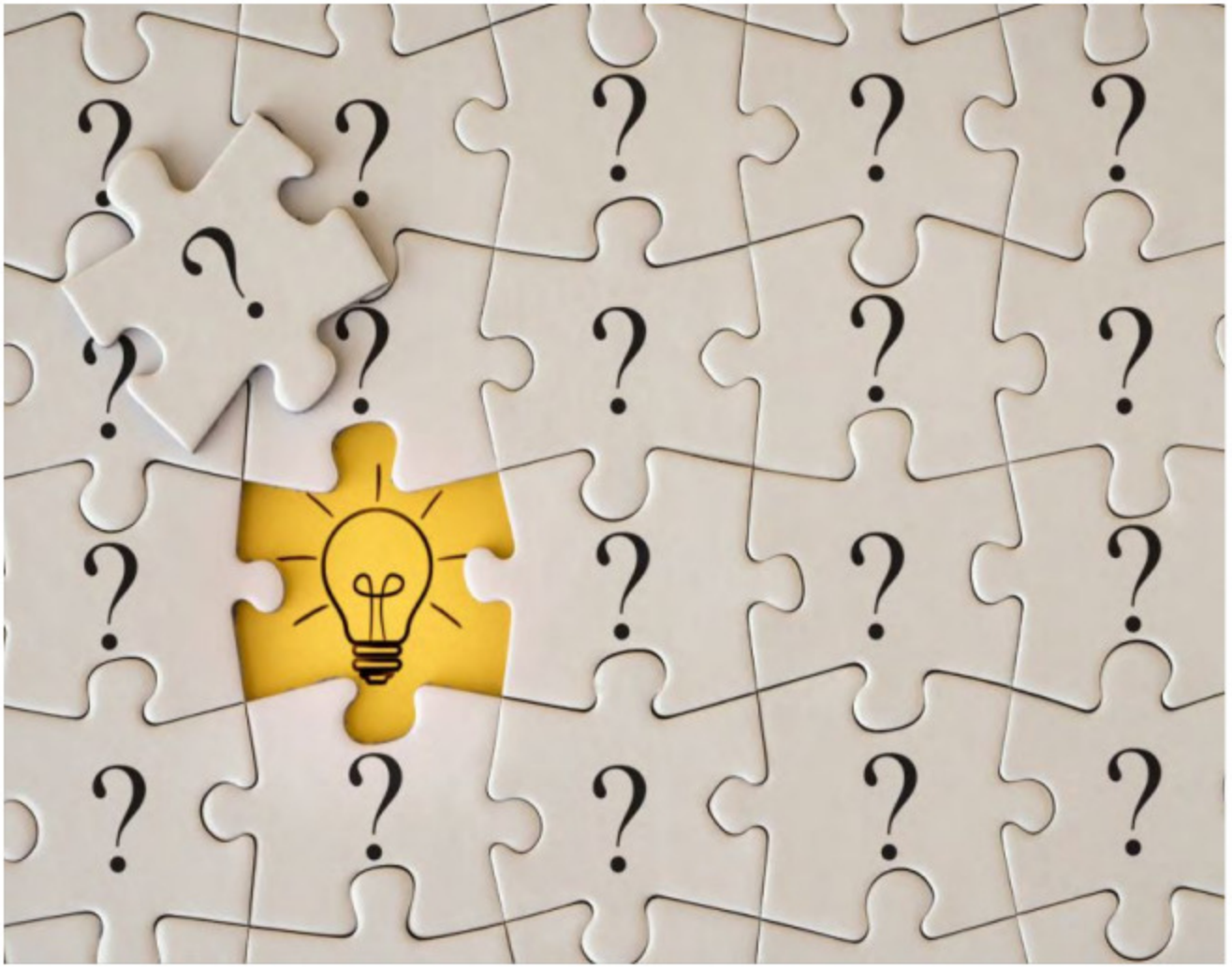
can explicitly standardize but are hard for competitors to replicate. Organisations must now begin to provide the much-needed answers to important questions about growth and scalability in the wake of this crisis. The main factors that will aid these include the ability to embed data and analytics in decision making, the creation of learning platforms that support both individual and institutional experimentation & learning at scale; and the cultivation of an organizational culture that fosters value creation with other partners.

Those organizations that are making the shift from closed systems and one-to-one transactional relationships to digital platforms and networks of mutually beneficial partnerships have proved more resilient during the crisis. A 2020 McKinsey report quoted an unnamed CEO to have said that "Every business is now a technology business, and what matters most is a deep understanding of the customer, which is enabled by technology".

Technology has revolutionized how organizations relate to their customers and their customers' customers and is therefore critical to create digitally enabled ecosystems as catalysts for growth and rapid adaptation.

When the Storms Come, Agile Stays Afloat

Agile companies regularly rethink and redesign their structures, governance mechanisms, and processes to strike a balance between speed, stability and efficiency. A company's transitioning into agile could be daunting as it could weigh the organization down and discouraging. One critical prerequisite for sustaining real change is establishing the relevant behavioural norms required for success. This requires more than making cultural statements or listing company values but also involves instilling the right kinds of behaviour in employees regarding how things are done.

While agile companies seem to share a few behavioural norms, other norms vary according to the nature of the company and the specific recipe it adopts to encourage a healthy, high-performing culture. The clearer and more widely adopted these behaviours are throughout the organization, the easier it will be to change structures, governance, and processes in pursuit of agility.

The current pandemic is surely the worst calamity most business leaders have seen, but it is hardly unique. The past two decades have witnessed a startling series of crises and black-swan events; the future won't be all that different. It is therefore likely to present companies with a series of unexpected challenges as well as opportunities, and business as usual will no longer be enough. An agile business system will help companies create the innovations they will need to not only survive but also thrive in these uncertain times and beyond. This crisis has successfully pushed businesses to work faster and better than they dreamed possible just a few months earlier. Organizations that can maintain that sense of possibility will continue to enjoy an enduring source of competitive advantage over peers.

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What Makes Nigeria Pop?

Onyedimmakachukwu NwaChinwe

Nigeria's population growth is a consequence of how we live, a key factor to consider in how we plan and a massive opportunity to harness how we grow. A problem? Not.

Between 1960 and 2010, Nigeria's population grew by 113.5 million people; implying a growth rate of 2.3 million people per year for the first 50years of our existence as an independent state. It has however been projected to triple over the next 50years. This implies that Nigeria could be home to over 473 million people by the year 2060, 314 million people more than in 2010, an increase of 6.3 million people per year. Without a doubt, these are alarming numbers! But what should worry us as Nigerians lie somewhere other than in population growth.

A great deal of focus has been given to Nigeria's population growth since the turn of the millennium, and this has always been phrased as a problem, in and of itself. The prevailing argument posits that as a nation, we are giving birth to more children than can be fed, raising more youths than can be educated and assured a bright future and, having more adults than can be gainfully employed, housed or guaranteed access to basic amenities.

On the face of it, this argument seems undeniable, but on a deeper look, we are drawn to the flipside of this argument - that in relation to the human potential and the other resources we have been blessed with as a nation, we are not producing as much food, creating as many opportunities or driving the level of economic growth that we can, and should, easily achieve. From this perspective, we may begin to appreciate that if we achieved close to our potential across the aforementioned, our population growth may not be such a scary number after all, and therefore, realise we are simply facing a classic challenge of underdevelopment, not over-population.

Indeed, the country's slow pace of development coupled with other attendant factors, are arguably heightening the rate of our population growth. This is not the crux of this piece, but understanding it is critical to better appreciating our many challenges as the world's largest black nation.

Why We Keep Getting Bigger

As earlier noted, Nigeria's population is growing, faster than ever before, and some of the key reasons for this are actually very positive. Our population is growing largely because as humans we are living longer, healthier lives. Infant mortality rates, once hovering above 200 deaths per 1000 births, are now slightly above a quarter of where they were 59 years ago. Death from treatable ailments, such as malaria, is also falling, and vaccination has reduced the incidences of epidemics (save for Covid-19, of course). When you throw into the mix our generally improved standard of living, relative to 59 years ago, you begin to appreciate why we are currently recording 74.2 deaths per 1000 births. Closer, but not far enough. Our low levels of development (infrastructural and institutional), high levels of inequality and poverty, and weak levels of individual and reproductive rights also contribute to what makes Nigeria pop.

You can look at it this way; when quality institutions delivering empowerment opportunities (schools and jobs) are few and largely inaccessible, people, particularly the socio-economically excluded, often skip the whole "career-building phase" (since it has nothing for them) and go straight into making families. Weak individual and women's reproductive rights then deliver an assist - teaming up with inadequate empowerment and enduring stereotypes of women as "only good for childbearing and home-making," this leads to scores of "unplanned" pregnancies, child marriages and socio-cultural pressures

on women to keep on giving birth, even when they would rather not.

Then, there is poverty and inequality. The reason poorer, socio-economically disadvantaged families give birth to more kids than the middle-class, more advantaged, families is less a factor of education, in and of itself, and more of economics. In essence, we all create families with self-sustenance in mind. For the middle-class, this is achieved, or hoped to be achieved, via the measured distribution of scarce resources, such as time—most of which goes to work, finances—how much school fees can one pay, and for quality schools, and infrastructure—how many bedrooms can one afford, and in a good neighborhood.

With poorer, socio-economically excluded families, the children are often seen as the resources. So, having more children is seen as a positive. Whereas middle-class families may retain domestic staff at home and have employees at work; in poorer families, the children often take care of the jobs at home and at work—whether that be on the farm, at the shop, or on the streets. Self-sustenance is also about setting up your children to make it in the world. Middle-class and more socio-economically advantaged families can achieve this with one, two or four children if they efficiently distribute the scarce resources at their disposal. Poorer families often have no such resources to begin with, and may then turn to the blind faith and hope

scare us. This means that, rather than freak out about how many babies are being born every day in Nigeria, we should spend more time making the most of our strong human capital to unlock economic opportunities and drive shared prosperity; something we have unfortunately been very poor at.

Population Growth: It's About How We Plan

When Quartz Africa wrote in 2018 that "Nigeria's population problem is the result of poor policy implementation," it was right. Policy execution has always been Nigeria's achilles heel. Our country has innumerable fault lines across economic strategy, urban development and the provision of public service. Our brief history is littered with pungent critiques of the poor design and execution of public policy or its total absence. These challenges of planning have been as constant as our population growth, and it is only its persistence that has made it seemingly impossible for our economy to carry the weight of our present population.

(faith and hope, regardless) that "if I have five, six or ten children, one may just make it out of the odds and help all of us."

These contexts presented above should be taken with exceptions in mind, but none of such exceptions alter the point that ensuring greater access to quality education and gainful empowerment opportunities, addressing pervasive poverty and run-away inequality, and strengthening individual and reproductive rights would probably moderate Nigeria's current population growth rate. The more important point, however, is that these factors could accelerate our pace of development so much that our population growth would cease to

urban areas." Two decades later, Prof. Ikeanyibe Marcellus of the Department of Public Administration at the University of Nigeria, wrote of the National Economic Empowerment and Development Strategy (NEEDS), the country's signature economic plans of the new millennium; "NEEDS as a development plan has not done better especially in the actual implementation than previous development plans in Nigeria. The four key objectives of employment generation, poverty reduction, wealth creation and value re-orientation are indeed attractive issues to be the crux of any worthwhile development plan. But their achievement in the medium term from 2003-2007 remains wishful thinking."

Today, the critiques—of urban planning and economic strategy—remain mostly unanswered. "Nigeria's basic physical infrastructure deficit severely compromises the country's prospects for economic growth and human development," said the Institute of Security Studies in 2017. "Levels of access to basic

persisted throughout Nigeria's history, is the elephant in the room. Dealing with that elephant requires a plan, one which must be centered on leveraging our massive human capital.

60% of Nigeria's population is under 25. StearsNG, a business intelligence publication focused on economic and political issues, has called this the country's greatest resource. "But like any resource," it adds, "young people are only valuable if a country uses them wisely. If Nigeria can educate her young people, we would have a resource that can power our country more effectively, more diversely and for much longer than any oilfield." This is inarguably true, and the way to go about it is seemingly obvious, even if painfully avoided. On one hand, more than 10 million Nigerian children do not, or cannot, make it to school,

and on the other hand finding quality, well-run public schools, especially at the primary and secondary levels, has never been more difficult. Dealing with both issues should be the country's number one priority, but with just 5.6% of Nigeria's 2021 Federal Budget allocated to education, as against the minimum 20% advised by UNESCO, it seems not.

The value of providing quality education to all is of critical importance to empowering Nigeria's 117 million working age population. More than 1 in 2 people in the country are either unemployed or underemployed, the National Bureau of Statistics (NBS) said in its Q4 2020 report. This is, in the least, a 56% loss in productivity that becomes even more glaring when you consider the fact that despite our numbers, we still do not have

enough people working as doctors (0.38 per 1000 people), nurses (1.2 per 1000 people), teachers (38 pupils per teacher), lawyers (0.5 per 1000 people), police officers (1 in 540), or in virtually every other vocation. Indeed, no country, large or small, could cater to its people bearing such crippling deficiency in productivity. Yet, the conversation about people and productivity is one that we do not have enough of. Rather than losing quality sleep worrying over how many we are in crowded urban areas and densely populated cities, what we should be staying awake on is how to put people to work and turn our population into a significant advantage for rapid socio-economic growth and development. The latter is the "Panadol" for the headache caused by the former.

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The Rebirth of Medical Technology

Oyeintare Olotu

The healthcare systems in Africa suffer from inadequate budgetary allocations, poor management and inadequate human capital. Of these three challenges, the greatest impediment to health in Sub-Saharan Africa remains the inequitable distribution of global health workforce as the gap between the potential of health systems and their actual performance continue to widen. Available data from the World Health Organisation (WHO) suggests that over 40% of its member states have less than 10 medical doctors per 10,000 of its population with over 26% of them reported to have less than 3 medical doctors per 10,000 of its population. According to the US National Institute of Health's Library of Medicine, USA and Canada with about 14% of the world population bears only 10% of the world disease burden but are home to 37% of the global health workforce. Sub-Saharan Africa on the other hand, with over 11% of the world's population bears over 24% of the global disease burden and can only boast of less than 3% of the global health workforce.

In a separate 2018 report, the WHO revealed that relative to a physician density of 26 and 28 doctors per 10,000 people in the US and UK respectively, Nigeria could barely boast of approximately 4 doctors per 10,000 people despite being ranked by the WHO as the country with the largest stock of health workforce in Africa. There are concerns that this figure would have shrunk further as the international migration of health workers has been on the rise. A 2017 Health Worker Migration Report of the WHO estimated that the number of migrant doctors and nurses working in Organization for Economic Co-operation and Development (OECD) countries had increased by 60% in the last decade; with an average of 600 General Practitioners (GP) estimated to have emigrated annually from Nigeria between 2010 and 2016.

Some advocates of traditional medicine have argued that the prevalent and widespread reliance on herbal and traditional medicine is primarily responsible for the relatively low patronage of medical doctors

and hence, the massive migration of Nigerian trained doctors to developed countries. However, the continued cases of avoidable deaths in the country contradict this position and emphasize the limitation of traditional medicine.

The African region still records high fatalities resulting from cardiovascular diseases while battling malaria, tuberculosis, measles and HIV. The outbreak of the Covid-19 pandemic further strained the already pressured health sector characterised by limited human capital and years of negligent and poor funding. Africa's healthcare sector is in dire need of radical solutions which can ride on innovative tech-driven strategies to significantly improve the healthcare service delivery.

How can technology be optimized to improve healthcare in African given that technological advancement has and continues to, improve every sphere of our daily lives, and healthcare shouldn't be an exception.

Physical distancing as a method of containing the spread of Covid-19 has resulted in a surge in the adoption of technological solutions in our daily lives, from grocery shopping, education, religious congregation, social norms, work and business, financial transactions as well as healthcare. For the most part, these technological methods have been in existence for some time now but the relevance was further exacerbated by the need for physical and social distancing following the outbreak of the covid-19 pandemic.

Healthcare professionals and caregivers across the world were overwhelmed as they worked in and out of shifts for long hours battling to save the lives of covid-19 patients. This coupled with the fact that healthcare experts discouraged physical trips to the hospital, emphasized the need for a transition from in-person to virtual healthcare delivery. The term that we now use to describe this transition is Telemedicine. According to the WHO, telemedicine is the delivery of

healthcare services, where distance is a critical factor, by all healthcare professionals using information and communication technologies for the exchange of valid information for the diagnosis, treatment and prevention of diseases and injuries, research and evaluation, and for continuous evaluation of health care providers, all in the interest of advancing the health of individuals and their communities. Put differently, Telemedicine is the art of remotely diagnosing and treating a patient.

While not novel, the idea of telemedicine does bridge the gap created by the social distancing rules and movement restrictions instituted in the wake of the global pandemic. With overstretched healthcare facilities and personnel, general practitioners have looked to alternative communication platforms to sustain contact with their patients and provide support and consultations. Over the past few months, the idea of telemedicine has gained more traction as the demand for mental health support significantly increased. Today, telemedicine has become the toast of healthcare delivery systems and has significantly evolved as more platforms emerge to provide high-quality, secure communications between practitioners and patients.

We have since witnessed the development of devices that support telemedicine such as those of TytoCare, a provider of on-demand medical exams with a remote healthcare provider. Their services enable patients to measure their vitals from the comfort of their homes during teleconsultation, bringing healthcare professionals closer to their patients with an increased likelihood of more accurate diagnosis. There is also Binah.

ai, which provides video-based health and wellness monitoring solutions that involve the extraction of medical-grade vitals using artificial intelligence (AI) based technology through the patients' smartphone.

In Africa, telemedicine is increasingly being used to communicate healthcare tips and fill the void created by the dearth of medical personnel. Over 400 million people live on the continent with very limited or no access to basic healthcare. Half of them live in rural areas where only one-quarter of doctors in Africa get deployed to. Examples of the telemedicine services available in Africa to a fair degree include neonatal care, maternal and child healthcare, intensive-care services, trauma care, mental health services, nutritional health, radiological services, etc.,

most of which are delivered through video consultation, telephone calls, text messages and chats. Service providers are able to cater to a diverse client base as long as the patients have access to a tablet, computer, or even a basic smartphone.

Lagos at the height of the pandemic, launched its Telemedicine initiative; Eko Telemed, to provide 24hours healthcare to residents of the state. It was aimed at protecting citizens and providing enlightenment on how to reduce the risk of contracting the Coronavirus. Eko Telemed features voice and video call consultation in English, Yoruba, Hausa, and Igbo, though its service was limited to COVID-related issues.

Doctorcare247 is also a Lagos-based service focused on providing robust

integrated telehealth platform that enables doctors and healthcare specialists to diagnose and treat patients online. Similarly, Tremendoc is a technology service company whose pilot app is a real-time doctor on-demand service for connecting patients to licensed doctors who can consult, recommend, test and diagnose a wide range of health concerns.

The adoption of telemedicine enables access to healthcare across every demographic. Accessible healthcare facilitates a preventive approach to battling diseases and other health-related conditions as people tend to have adequate information on certain health conditions and can take steps in preventing further deterioration of such conditions and seeking further medical attention.

Telemedicine, like conventional medicine, also has its challenges in Africa; primarily the unavailability of basic infrastructures such as stable electricity, insufficient network coverage and broadband internet service. In Nigeria for instance, while teledensity is over 102%, internet penetration is only 47.1%. This poses about as much a challenge as the concentration of health workers in the urban areas. Cost of service is also a challenge as a significant number of people in rural areas do not have the financial capacity to access telemedicine via the available channels. The high cost of such virtual consultation makes it difficult for the lower class of the society to access it. Collaboration between the government, through its Ministries, Departments and Agencies (MDAs), health care practitioners, and telecommunications service providers is required to create awareness, grant necessary concessions, develop laws and regulations with regards to the adoption and harmonization of new services with existing ones to drive this initiative. The absence

of a regulatory body or agency to regulate telemedicine practices is also a challenge as the role of government and other interested players in the development of virtual healthcare has not been clearly defined within any legal or regulatory framework.

The telemedicine initiative is to be in the simplest most understandable form. For example, toll-free or subsidized telephone consultation in local languages, with a focus on preventive health and healthy lifestyle support. A continuous learning approach must be adopted to reduce patients' barriers to accessing telemedicine in a bid to dissuade community dwellers from the negative perception they have about orthodox medicine. Community and religious leaders also have a key role to play in the success of the continuous learning process.

It has become imperative for policies needed to guide the implementation of telemedicine within the confines of medical practice to be formulated and implemented. These policies should cover the scope of care, relevant

regulations and minimum criteria for practitioners and minimum facility requirements. It can be likened to the Central Bank of Nigeria's Financial Inclusion Initiative, where the most remote villages and illiterate citizens understand the essence, feel the impact and understand that healthy living is not only for the elite for it to be effective.

In conclusion, telemedicine brings a new dimension to the patient-doctor relationship with technology providing a platform in the shift of healthcare from the doctor's office to the patient's convenience. This gives the healthcare professional the opportunity to evaluate the patient in their natural habitat and better appreciate the surroundings in which their patients' health conditions occur. Telemedicine promises to be an integral part of the healthcare and whilst it still requires some flexibility and creativity, it is surely going to play a key role in charting the course for the future of healthcare.

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The Coming of Age of the Nigerian Logistics Industry

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History has shown that terrible events often lead to great transformations. The bubonic plague of the 1300s birthed the modern employment contract. Cholera epidemics of the mid-1800s gave rise to urban parks and radically improved infrastructure, whilst the 1918 Spanish Flu revolutionized healthcare. The COVID-19 pandemic is no different with the tales of doom and gloom giving way to the recognition of latent opportunities.

When the virus hit the shores of Africa in February 2020, many nations went into total lockdown with the introduction of curfews and strict movement restrictions as part of the social distancing precautions taken to flatten the pandemic curve. This crippled many industries and businesses such as travel start-ups, argic-tech ventures, ride-hailing companies, and co-working spaces, to mention a few.

With movement restricted and survival still a necessity, the 'e' in e-commerce came to play and businesses had to find ways to sell to the only permitted market for essential transactions,
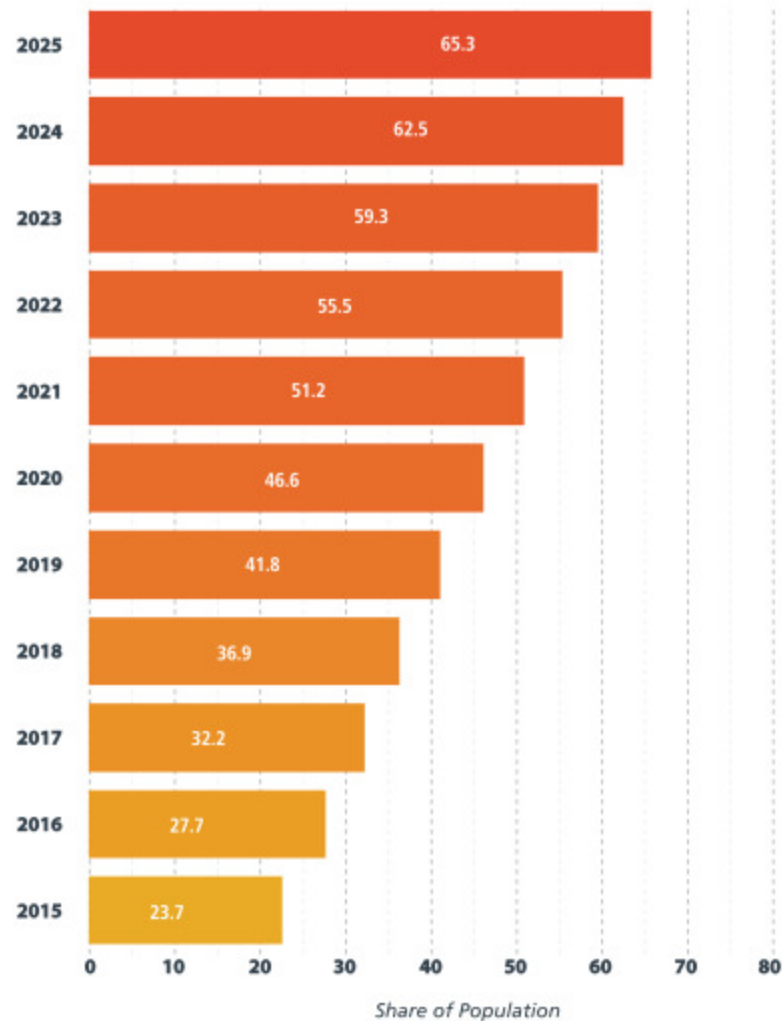
the online market. The online market offered a reliable conduit for the continuation of trade and provision of necessities and with several businesses, established or upcoming, falling in line. A June 2020 Visa survey showed that 71% of the survey respondents, who were Nigerians with bank accounts, shopped online for the first time during the pandemic. Consequently, the Nigerian logistics industry became the most vital lifeline for the supply of essential commodities with delivery men becoming an essential frontline service.

Prior to the pandemic, e-commerce had already started the transformation of trade globally. According to Statistica, Business-to-Consumer (B2C) transactions grew by 53.3% from US$1.5 trillion in 2014 to US$2.3 trillion in 2017 and are projected to grow to US$4.88 trillion in 2021. The United States Department of Commerce estimates that the value of the e-commerce industry in Nigeria stands at US$12 billion and forecasted the industry to be worth about US$75 billion by 2025. The principal success drivers attributable to this projected growth are internet penetration, efficient payment systems and a functional logistics industry.

Like the payment systems and logistics industry, internet adoption in Nigeria has witnessed impressive growth over the last decade and the next ten years is poised for a bigger explosion owing to the combination of a rising population of digital natives and deepening broadband penetration. As of July 2020, Statistica estimated that 46.6% of the Nigerian population are internet users and projected growth to 65.3% by 2025.

Internet user penetration in Nigeria from 2015 to 2025

Year	Share of Population
2025	65.3
2024	62.5
2023	59.3
2022	55.5
2021	51.2
2020	46.6
2019	41.8
2018	36.9
2017	32.2
2016	27.7
2015	23.7

Share of Population

Internet penetration has also been bolstered by declining data cost, affordable smartphones amidst a vibrant market for used smartphones as well as growing and sustained e-payment revolution. The widespread adoption of electronic payment methods has reduced the traditional exchange of cash as a means of payment.

According to data from the Nigeria Inter-Bank Settlement System (NIBSS), NIP (NIBBS Instant Payment) transactions rose from about 4.4

million in 2012 to 803.1 million in 2019 and was put at 569 million transactions in Q3 2020. This exponential growth is a result of rapid innovation and investment by banks and other payment-based fintech companies in payment technology infrastructure. This growth is expected to be intensified further by the lenient reduction in fees payable on mobile and internet payments/transfers as well as the safety implications of going cashless to prevent further spread of the virus.
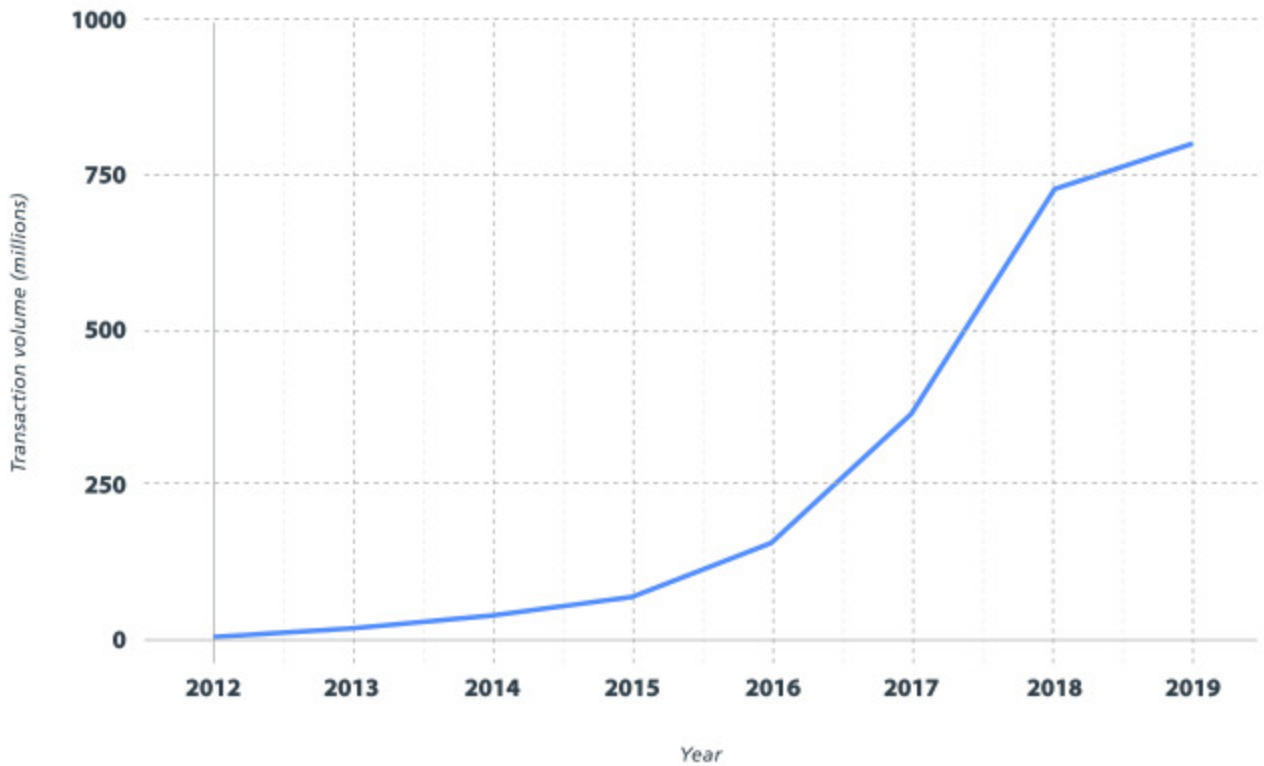
Growth of NIP transactions between 2012 and 2019

The logistics industry is arguably the most instrumental support system in the continuous movement of the wheels of online commerce. In fact, without logistic companies, e-commerce would not be nearly as successful as it currently is. Since the outbreak of COVID-19, demand for last-mile logistics; the final delivery process from the distribution centre to the end-user, has increased significantly as consumers are more likely to resort to online stores and e-commerce sites to meet their urgent needs for food, clothes and other home essentials. The importance of this industry is further evident in

the numbers, as the Global Logistics Market Report, valued global logistics in 2018 at US$4,730 billion and projects this to attain an impressive value of US$6,300 billion by 2024.

In Nigeria, there has been a steady growth and development of the logistics industry which was valued at US$700 million (N250 billion) in 2018 according to the Logistics and Supply Chain industry report. Some industry experts have argued that the industry will touch US$1.5 billion by 2023. A few years ago, the sector was dominated by international courier companies such as DHL, FedEx, UPS and indigenous companies like Red Star Express, ABC Cargo, EMS, etc. until the influx of top e-commerce players like Jumia and Konga, who established logistic operations that

facilitated same-day delivery services at relatively more affordable prices, thereby strengthening the growth of the sector.

As a developing country struggling with deeply rooted mistrust for indigenous companies and enormous infrastructural gaps, the growth trajectory for the logistics sector has not been void of bumps. Some of the challenges faced by the players in the sector are poor infrastructure, delayed custom procedures, road congestion, bottlenecks for international shipments, poor tracking/tracing capabilities and competence, multiple taxation and fines. These deficiencies were some of the determinants of the Biennial Global Logistics Performance Index (LPI) where Nigeria was ranked 112 out of 160 countries.
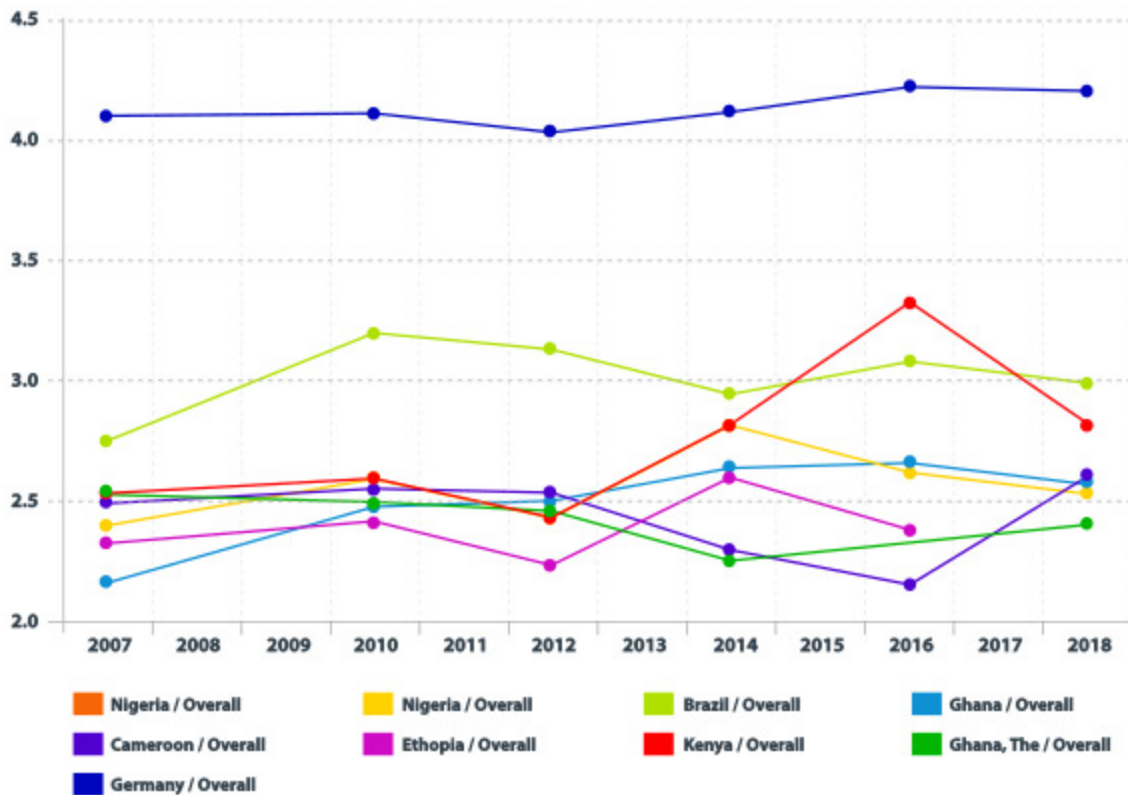
Figue 1: **Overall LPI score for select countries (2007-2018)   Source: World Bank**

Notwithstanding these challenges, the sector is well-positioned for the future. In recent years, significant innovation has been made to facilitate technological advancements, integration and globalization. There have been advancements in Global Positioning System (GPS) tracking, automated material handling, drone development, internet of things (IoT), and smart logistics technology, all of which have improved efficiencies along with truck transportation, international transportation, supply chain management and shipment tracking. While some of these technological innovations are not available in Nigeria, several logistic companies have emerged and are capitalizing on these utilities to enable them to deliver superior services such as on-demand delivery.

In Nigeria, some of these cutting-edge technologies have been adopted to improve the efficiency of services. Route planning technology is widely used by third-party logistics to plan deliveries, schedule appointments, optimize routes, dispatch orders and communicate with drivers in a completely paperless environment. Similarly, mobile apps with real-time delivery tracking and support have been adopted by logistics companies like Plentywaka, Kwik, GIG logistics, etc. and have significantly enhanced customer experience. Kobo360, a Nigerian freight logistics start-up, is reportedly poised to build a global logistics operating system (a blockchain-enabled platform) that will power trade and commerce across Africa and Emerging Markets.

With enabling infrastructure, more game-changing tools like drones and driverless vehicles, Radio Frequency Identification (RFID) Automated Inventory Tracking System (AITS), electronic proof of delivery (POD) would be underway.

In addition, its low-cost entry and ability to deliver quick returns, for the most part, make it a sweet spot for interested participants. The indispensability of the logistics sector is becoming more pronounced in the face of growing customer demands and will play its rightful role in the economic progress of the country.

With the plethora of opportunities lined up for the logistics sector in Nigeria, effective strategies would be required by players to fully maximize returns and some of these

strategies can be learned from the global players in this sector. At a global scale, e-commerce giants have recognized the pivotal role logistics plays in the success of any core business and have wasted no time in exploring and maximizing its potential and existing opportunities. Amazon, a multinational technology company whose transformation from a simple online bookseller to the most formidable force in the retail industry is a unique case study of an effective logistics strategy. The company upon realizing the significance of ultimate customer satisfaction within its ecosystem launched its logistics subsidiary to facilitate quicker delivery services for its goods. In 2018, Amazon's share of the U.S. e-commerce market hit 49% and by 2019, most of its revenues came from retail third-party seller services. After years of investments in the logistics space, Amazon has grown beyond retail into a bona fide logistics provider all on its own. By capitalizing on its logistics business, the company laid the groundwork for 'E-Commerce fulfillment'; a term used to describe the end-to-end process of receiving inventory, processing requests and dispatching orders.

Similarly, Alibaba invested over $3 billion in its logistics affiliate, Cainiao, in a move to strengthen its logistics operations. In a statement credited to Cainiao's President, Mr. Lin Wun, he stated that "Logistics is no longer an afterthought. Today, logistics has become a game-changer and key differentiator that sets one business apart from another". Logistics is known as the key pillar of the Alibaba business operating system and ensures the smooth functioning of its other businesses.

The Nigerian e-commerce counterparts have also grown significantly in the quest to meet the needs of millions of consumers who have embraced online shopping. Jumia, one of the e-commerce players, has built a network of delivery agents. In the wake of the pandemic, Jumia announced its partnerships with brands like Reckitt Benckiser, Procter & Gamble and Coca-Cola to enable customers to access essential hygiene products at affordable prices during the lockdown. Konga, another e-commerce player in Nigeria, established its affiliate logistic platform, Kxpress to resolve the challenges of logistics for its customers and other players in the industry.

Although adequate logistics improve delivery time and increases the likelihood of retaining customers, the cost of building stronger logistics networks akin to the 1-day delivery services offered by the likes of Amazon Prime can be prohibitive for new players. This necessitates the need for partnerships between e-commerce/ SME platforms and established logistics businesses in exploiting the growing market. The synergy between these individual businesses could result in a retail explosion.

Amidst the evolving strategies and initiatives to halt the spread of the coronavirus pandemic, shifting consumer behavior to online trade channels and digital platforms, can provide the needed incentive for further investments in the logistics sector, and this will further cement the place of e-commerce and logistics as enabling partners for exchange of goods which will, in turn, promote the growth of Nigeria's economy.

This is the new normal

Though the biggest opportunity in the logistics business all over the world in recent times is e-commerce which is technology-driven, there are other sectors where logistics still play a strategically important role.

Since the federal government prohibited the utilization of official FX sources for importation of 41 products and a renewed focus on building agricultural, manufacturing and industrial units, consumer expectations have significantly increased. Both individuals and

businesses expect to get goods faster, more flexibly, and – in the case of consumers - at low or no delivery cost. Furthermore, in a world of just-in-time production processes, it is not only the time and cost of delivery of shipments that matters but also its reliability and predictability.

With the sheer volume of goods produced by these sectors, it is imperative that investment in logistics infrastructure (transportation, storage, postal service, telecommunication, etc.) is made on a national scale. Currently, most warehouses are in and around Lagos state due to the presence of industrial parks and proximity to seaports and airports in the country. The conditions of the road infrastructure have also depreciated, causing an unpleasant driving experience for all motorists.

These required infrastructural investments will involve seamless and connected networks of 21st century roads, airports, maritime space, train routes and land transportation networks in cities, towns, small communities and even the rural areas. Better quality of physical infrastructures would increase logistics capacity, enable overall efficiency of the production cycle and improve the quality of services rendered. Likewise, an economy that enjoys low logistics costs, short transportation time, and the creation of work enlargement opportunities would reap economic growth and a positive competitive advantage on the global front.

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