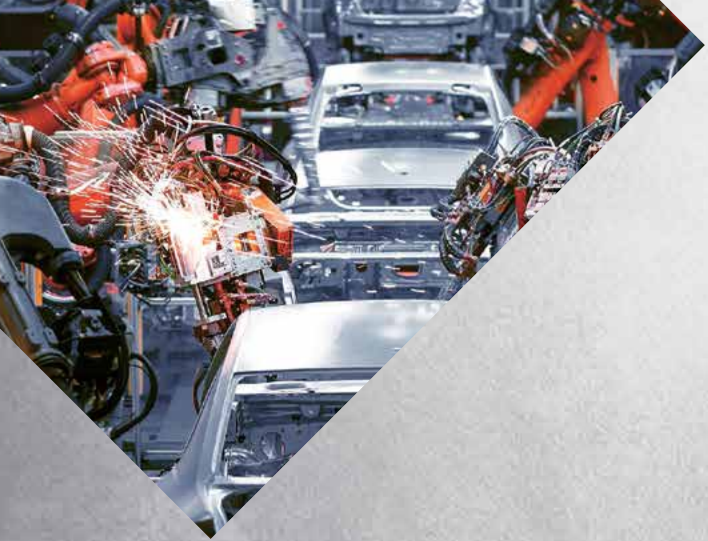

Productivity *Insights*

Vol. 1–1

10 Opportunities for SME Recovery

Dr. Inderjit Singh Dhaliwal

Asian Productivity Organization

The Asian Productivity Organization (APO) is an intergovernmental organization committed to improving productivity in the Asia-Pacific region. Established in 1961, the APO contributes to the sustainable socioeconomic development of the region through policy advisory services, acting as a think tank, and undertaking smart initiatives in the industry, agriculture, service, and public sectors. The APO is shaping the future of the region by assisting member economies in formulating national strategies for enhanced productivity and through a range of institutional capacity-building efforts, including research and centers of excellence in member countries.

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10 OPPORTUNITIES FOR SME RECOVERY

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PREFACE

The P-Insights, short for "Productivity Insights," is an extension of the Productivity Talk (P-Talk) series, which is a flagship program under the APO Secretariat's digital information initiative. Born out of both necessity and creativity under the prolonged COVID-19 pandemic, the interactive, livestreamed P-Talks bring practitioners, experts, policymakers, and ordinary citizens from all walks of life with a passion for productivity to share their experience, views, and practical tips on productivity improvement.

With speakers from every corner of the world, the P-Talks effectively convey productivity information to APO member countries and beyond. However, it was recognized that many of the P-Talk speakers had much more to offer beyond the 60-minute presentations and Q&A sessions that are the hallmarks of the series. To take full advantage of their broad knowledge and expertise, some were invited to elaborate on their P-Talks, resulting in this publication. It is hoped that the P-Insights will give readers a deeper understanding of the practices and applications of productivity as they are evolving during the pandemic and being adapted to meet different needs in the anticipated new normal.

INTRODUCTION

The world is still gripped by the COVID-19 pandemic and struggling to get a handle on the health challenges posed. As the year draws to a close, there appears to be light at the end of tunnel, with the UK becoming the first country in the world to approve the public use of both Pfizer-BioNTech and Oxford-AstraZeneca vaccines. Other countries are now also playing catch-up. They are assessing the clinical efficacy results of not only the above but also candidates from Moderna, Sinovac, and Janssen in an effort to pave the way for mass inoculation.

There are still several logistics issues to address before the dust finally settles on this pandemic. Mass vaccination will take time and effort across governments to implement. The effects of herd immunity may not be seen until several months later. The cost of vaccine delivery and production bottlenecks present further barriers that will take at least the greater part of 2021 to resolve.

In the meantime, global economies are facing the greatest challenge of the century, perhaps as bad as if not worse than the 1929 Great Depression. Companies, especially SMEs, are being hit badly, with demand dropping drastically for many sectors of the economy. Jobs are being lost, cash flows are crippling companies, and certain industries face permanent restructuring. How should SMEs react to this unprecedented disruption that most have never faced in our lifetimes? Let me start with a quote from Lee Ka Shing, the famous Hong Kong tycoon-entrepreneur, about how one should react in good times and bad: "I do not get overly optimistic when the market is good, nor overly pessimistic when the market is down [1]".

I prefer to look at all the challenges we are facing as opportunities for the future. Research has shown that some of the most resilient companies started during "bad times" or in times of a downturn or a recession. I personally started several companies over the last 20 years. Two of those companies were started during recession years in 1997 and 1998 and both are doing well even today.

How can people, companies, and countries survive this and come out stronger? What are the challenges that SMEs will face? What are the opportunities that will emerge in the post-COVID-19 new normal that SMEs should start looking out for?

This paper shares what I see as challenges that economies, companies, and people will face and, more importantly, what opportunities will emerge amid these challenges. I have identified 10 challenges that should also be viewed as opportunities that SMEs should pay attention to during this great disruption or COVID-19 economic crisis. By doing this correctly, SMEs will not just survive but come out stronger in the new normal ahead of us.

I start by looking at the economic impact of the COVID-19 pandemic. This includes published data from reputable global organizations like the World Bank and the International Monetary Fund (IMF) as well as recent survey results conducted to assess the impact of the pandemic on SMEs and startups. I then share ideas on the 10 opportunities that will emerge and how SMEs should position themselves to tap those opportunities.

ECONOMIC IMPACT OF COVID-19

The data shared here are from various sources. First, the World Economic Outlook published by the IMF indicates the severe impact on global economies. Advanced economies face significant downturns in the near term, as shown in Table 1 [2]. While projections show a bounce-back in 2021, this remains questionable as the world tries to get a handle on COVID-19 health issues and as countries see their second and third waves of infections, with some going back to lockdowns.

TABLE 1

LATEST WORLD ECONOMIC OUTLOOK GROWTH PROJECTIONS.

		Projections	
	2019	2020	2021
World output	**2.8**	**–4.4**	**5.2**
Advanced economies	**1.7**	**–5.8**	**3.9**
USA	**2.2**	**–4.3**	**3.1**
Euro area	**1.3**	**–8.3**	**5.2**
Germany	0.6	–6.0	4.2
France	1.5	–9.8	6.0
Italy	0.3	–10.6	5.2
Spain	2.0	–12.8	7.2
Japan	**0.7**	**–5.3**	**2.3**
UK	**1.5**	**–9.8**	**5.9**
Canada	**1.7**	**–7.1**	**5.2**
Other	**1.7**	**–3.8**	**3.6**
Emerging markets and developing economies	**3.7**	**–3.3**	**6.0**
Emerging and developing Asia	**5.5**	**–1.7**	**8.0**
China	6.1	1.9	8.2
India	4.2	–10.3	8.8
ASEAN-5	4.9	–3.4	6.2
Emerging and developing Europe	**2.1**	**–4.6**	**3.9**
Russia	1.3	–4.1	2.8
Latin America and the Caribbean	**0.0**	**–8.1**	**3.6**

(Continued on next page)

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		Projections	
	2019	2020	2021
Brazil	1.1	−5.8	2.8
Mexico	−0.3	−9.0	3.5
Middle East and Central Asia	**1.4**	**−4.1**	**3.0**
Saudi Arabia	0.3	−5.4	3.1
Sub-Saharan Africa	**3.2**	**−3.0**	**3.1**
Nigeria	2.2	−4.3	1.7
South Africa	0.2	−8.0	3.0
Low-income developing countries	**5.3**	**−1.2**	**4.9**

Note: Real GDP, annual percent change.
Source: IMF [2].

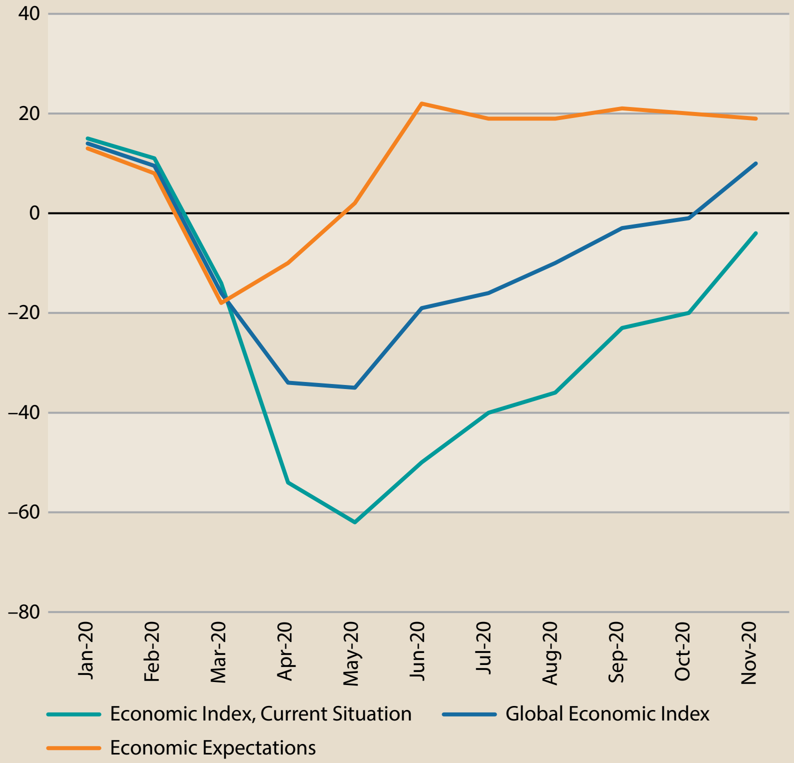
World Bank data estimate downgrades in economic forecasts. Compared with past global recessions, this COVID-19 disruption is seeing the steepest downgrades in forecasts, even though with the better-than-expected final results of phase 3 clinical trials from Moderna, Pfizer-BioNTech, and Oxford-AstraZeneca of around 95% efficacy rates, the economic sentiments rebounded in November 2020, as shown in Figure 1 [3].

To gauge business sentiment across regions, the World Business Angels Forum (WBAF) conducted an in-house survey of SMEs and startups and the results were worrying, as summarized below [4]:

- 82% expected their funds would last less than six months without any additional funding; 30% of respondents reported that their current funds would last more than three months.
- 41% of respondents reported a >50% drop in market demand for their services or products.
- 63% of startups surveyed planned to change their business models in the postpandemic business cycle.
- 36% of respondents had definite plans to pivot their business during that current business cycle.

FIGURE 1

GLOBAL ECONOMIC SENTIMENT PROJECTIONS.



Source: World Bank [3].

Unfortunately, based on the WBAF survey, by the time this paper is published, many companies will have run out of money and may have shut down. The World Economic Forum identified several risks to the global economy [5]:

- 500 million people falling into poverty,
- A 3% drop in world output,
- An anticipated fall in global trade of up to 32%, and
- An estimated 40% drop in FDI.

Finally, the World Bank predicted that the global GDP would shrink by 5.2% in 2020 and that we would see the worst scenario since World War II, with nearly triple the economic decline experienced during the 2009 recession.

While all the data show a worrisome scenario for economies, countries, and people, we must realize that the global economy is a lot more resilient and much more diversified today compared with even 20 years ago. Instead of feeling despair over the negative data we are seeing all around us, SMEs and startups should look at this as a window to spot new opportunities in the new normal that will emerge soon after the health issues of the pandemic are brought under control. Companies that spot these opportunities early will emerge stronger and as winners in the post-COVID-19 world.

10 OPPORTUNITIES AHEAD

Before we look at the opportunities for SMEs in the new normal of the post-COVID-19 world, I will share how I see the whole COVID-19 issue playing out from the beginning until full economic recovery. We must be prepared for three phases of the impact of COVID-19 on the global economy and companies. We need a strategy at each of the phases. This is how I see the three phases playing out and the time periods for each. These phases will be same for any type of disruption we will face in the future.

> **Phase 1** (first six months to one year): Time of **chaos and confusion**, near-zero business, uncertain future as health issues spread first and then stabilize.
>
> **Phase 2** (two years after phase 1): Period of **survival and collapse**, when businesses restart as the health issues settle.
>
> **Phase 3** (beyond two years, when phase 2 ends): Moment of **rejuvenation and regrowth** of companies that survived and the beginning of **newer, stronger startups**.

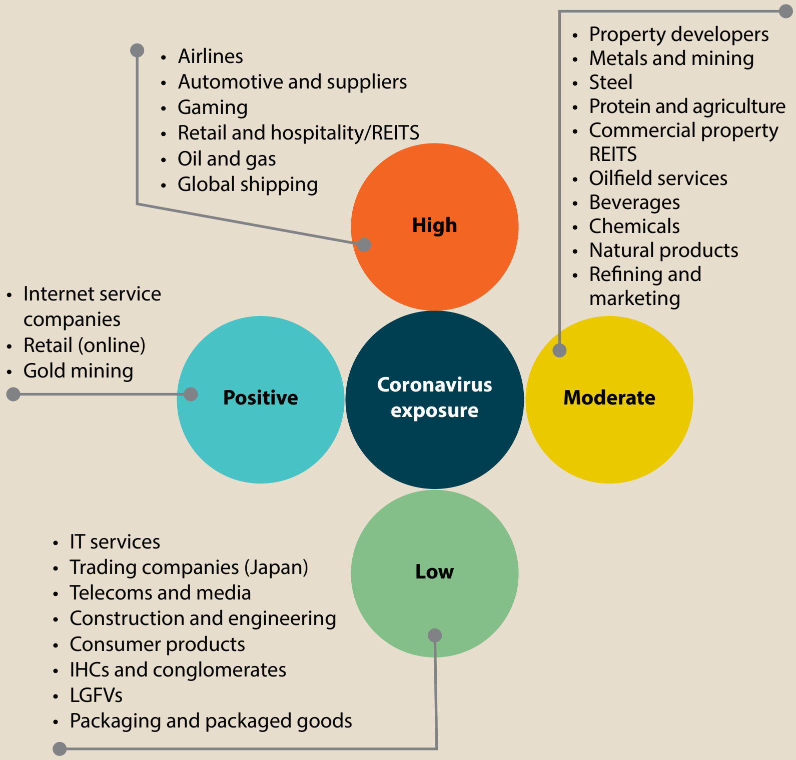
SMEs should be realistic about the impact of pandemic on the global economy, on their industries, on their companies, and on their employees. Getting the right sense of what is going to happen and a sense of the timing could make a difference between survival or collapse, not today, but when the new normal starts to shape up during phase 2. Preparing well by adopting new skill sets, new technology, and new business models will be a necessity and not a “nice to have.” SMEs that spot the opportunities early and have prepared well to tap them will emerge as the new winners. Those who refuse to change will collapse. It is thus useful to understand what the future opportunities are early so that SMEs can start planning ahead.

This paper attempts to identify 10 opportunities that SMEs should be paying attention to. Thus, while SMEs are firefighting in phase 1, they should remember to prepare for phase 2.

After almost 10 months of the first phase, we can observe that not every industry was hit equally. Some were hit very badly, and some thrived amid the crisis. Figures 2 and 3 give snapshots of how industries in the Asia-Pacific region have been affected thus far [6]. The impact has been similar globally.

FIGURE 2

ASIA-PACIFIC CORONAVIRUS EXPOSURE HEAT MAP BY INDUSTRY.



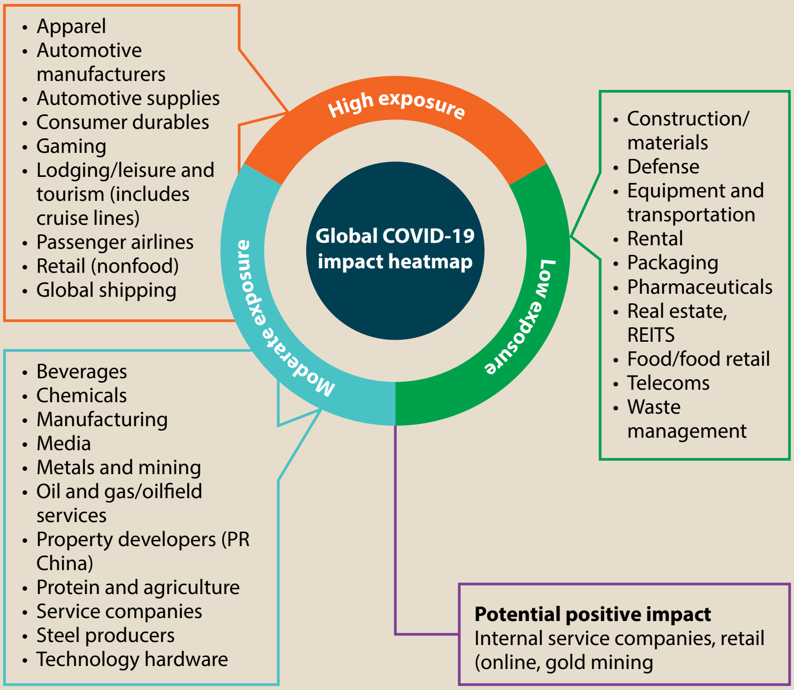
Note: IHCs, investment holding companies.
Source: Moody's Investors Service [6].

Airlines, the hospitality industry, and retailers and malls were very badly hit. Online retail, the IT industry, and groceries and essential retail remained strong even in depths of the crisis. Interestingly, one asset class was very positive during the depth of the crisis: Bitcoin. As the world lost confidence in global currencies, confidence in cryptocurrencies grew.

FIGURE 3

THE COVID-19 HEAT MAP.

COVID-19-induced economic disruption will disproportionately impact some industry sectors more than others



Source: Moody's Business Standard [6].

Emerging opportunities that SMEs should take note of and be prepared to tap may entail pivoting business models, shedding some business segments and starting new ones, building on old strengths, and acquiring new skills, technologies, and business models. Here are the 10 challenges that are also opportunities for all of us:

1. Diversification and realignment of supply chains
2. Digitization and technology adoption
3. "Zoomization" of all businesses

4. Service industry transformation

5. Local manufacturing for customized mass production

6. SMEs becoming global

7. Talent recruitment and location

8. Education and skills of the future

9. Real estate

10. Food security

Opportunity 1: Diversification and Realignment of Supply Chains

Supply chain realignment started with the trade war initiated by the USA against PR China, which became a global trade war of sorts, with PR China and Australia having issues, companies in Asia facing difficulties in dealing with IR Iran, and sanctions imposed by the USA on companies in PR China and Europe. US trade restrictions accelerated the pace of deglobalization already in progress as nations tried to appease their middle-class populations with more and more protectionism. This made countries realize that they needed to diversify their supply chains and rely less on just a single source. Governments started giving tax incentives for companies to bring back their production and operations to their own shores. The USA is one example. In Japan, the government dished out a USD2.2 billion package to incentivize Japanese companies to leave PR China and return production to Japan [7].

When COVID-19 hit PR China, it went into a lockdown and factories shut for as long as two months in one stretch. Even as the lockdowns were lifted in PR China, factories took months to normalize their production capacities. This further accelerated the search for supply chain diversification.

Therein lies the first and most significant opportunity for SMEs: we will soon see a complete realignment of global supply chains at an unprecedented rate and scale as companies and countries reexamine their overreliance on PR

China. Multiregional and multicompany sourcing will become a priority for most large companies and for all countries. By tapping technologies and with good local knowledge, there is an opportunity for SMEs to be part of new world supply chains.

Clearly, there is an urgent need for diversity and resilience in each supply chain so that the next big disruption does not cripple the distribution of goods and services. While the world is connected digitally and will remain so, the era of mass production and cross-border deliveries/transportation will no longer be viable in the long term. With the emergence of customized mass production and more localization, we will see production for local markets (including regional countries) rather than production for export to distant shores. Companies will rethink where they locate.

Local and regional manufacturing will restart for some industries as technology enables industries and companies to become less dependent on low-cost input factors and instead focus on productivity, technology, and skilled manpower for their production needs. SMEs could become the new producers of goods or services. If they remain supporting industries, they will need to reposition themselves in the new production centers in their regions to be a useful part of the whole supply chain.

While the conventional wisdom has been that expensive cities like Singapore cannot compete because of their high cost structure, this is an old argument that can no longer hold water. Take Singapore as an example. There are two main contributing factors to the cost of doing business in Singapore. The first, real estate or land cost, can be easily solved by the government by pricing industrial land differently. The second, labor cost and availability, is an old argument that technology has already solved using artificial intelligence (AI), robotics, and other solutions.

As supply chains are realigned and reformed, SMEs must consider the impact of business relocation, particularly manpower, logistic, and tax implications. Thus, SMEs urgently need to understand how global supply chains will realign and start planning to tap the new opportunities that will arise for them to remain useful players in the whole ecosystem. This will mean reskilling of the workforce, adjustment and pivoting to new business models, and adopting technologies to strengthen their offerings.

Opportunity 2: Digitization and Technology Adoption

While change is the only constant, change management is difficult. Companies typically struggle to get people to change and accept new business processes and new ways of doing things, especially adapting to new technologies. If there is one good thing that came out of the COVID-19 crisis, it is that countries, companies, employees, and people in general were forced to change at superfast speed.

In Singapore, for more than two decades, the government had been pushing companies, especially SMEs, to improve productivity, adopt technology, and, more recently, to digitize their businesses, but the rate of adoption and change was at a snail's pace. Many SMEs and employees remained resistant to change and refused to adopt technology to improve.

The COVID-19 crisis pushed people and businesses into new digital platforms by necessity. They had no choice but to change or perish. We saw demand rapidly shifting to online platforms. Although some, especially older people, feared purchasing or transacting online, lockdowns and social distancing requirements forced them to start using digital platforms.

Digitalization has become a new reality for people and companies, and this behavior will endure beyond COVID-19 as online users adapt to the new normal of digital life. As stated above, industries that have thrived the most during the COVID-19 crisis are those that were already digital. In particular, digital commerce boomed (and we saw valuations of e-commerce companies ballooning). Other areas that thrived are streaming entertainment, cloud computing, digital payments, teleconferencing (digital connectivity), education, and digital content.

This is the second opportunity for SMEs. The good news for SMEs is that digitalization is still at a low base even today and there is a long runway available for any company that wants to occupy a place in the new cybereconomy. What do SMEs need to do to tap this opportunity? They need to refine and pivot business models and leverage technology early. Technology and digitalization will affect every area of business, even in the most traditional sectors. While the earliest examples are innovative technology use cases to combat the virus itself, like test kits, contact-tracing software, and the like, online retail, AI, robotics, digital banking, logistics automatization, healthcare, and many more will be soon transformed via digitization or new technology adoption.

Technology and digitization were already disrupting and transforming industries before COVID-19 hit the world. Take Airbnb as an example. The simple use of a digital platform transformed how room booking occurs around the world. The technology was not rocket science; it was more of a new business model that could work because of digitalization. The outcome was, before COVID-19 disrupted the travel industry, that Airbnb was booking more rooms than Marriot or Hilton, two of the oldest global hotel chains. Another example is Uber, which transformed the taxi industry by similarly using existing technology with a new business model.

SMEs should therefore take the opportunity to look at every angle, every area, and every resource to identify where digitalization and technology could create new business models that the world will need as we get used to the cybereconomy that is just around the corner.

Opportunity 3: "Zoomization" of All Businesses

Opportunity 3 is related to digitization but even wider. What is the new cybereconomy? I define it as the virtual world becoming more integrated with the physical one, thanks to advances in digital connectivity. This was already happening as Industry 4.0 was reshaping the world. Industry 4.0 or the Fourth Industrial Revolution is causing the merging or convergence of the physical, digital, and biological worlds. It is like a blurring of the lines between machines, computers, and humans performing activities. This has been made possible because of rapid advances in AI, robotics, and the Internet of Things (IoT), along with the growth of technologies that make genetic engineering, quantum computing, and 3D printing including of food and human organs possible.

The "convergence of the physical, digital, and biological worlds" is what I mean by the "Zoomization" of all businesses. Everything will be merged in the cybereconomy. "Zoom" is now a verb with a new meaning. The world is more connected, not only digitally but also between machines and people and machines and other machines. AI is making people less useful contributors to the economy. This has already permanently changed how people use technology with lasting, transformative impacts on work, consumption behavior, delivery of goods and services, education, and many more areas.

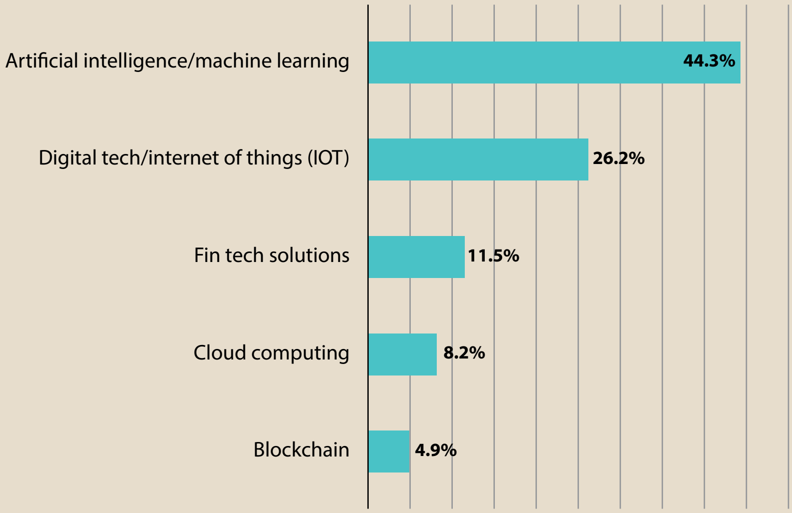
One of the most obvious "Zoomizations" has been teleconferencing, which has already been very widely adopted across many industry segments, work, education, and leisure. What we never thought would work has worked reasonably well in many of these areas. For example, livestreaming has become an important new sales channel, even for conventional businesses such as luxury goods, real estate, conferences, and many more. Even 94-year-olds are Zooming to see friends and family. Is the aging sector an underserved demographic in this respect? Are there new opportunities?

SMEs must quickly realize that they must jump onto the bandwagon, even if it is as a complementary channel to existing ones to reach out to customers, partners, employees, and all stakeholders. They have to "Zoomify" their businesses to remain relevant in the future. It is timely for SMEs to identify some low-hanging fruit they can easily pick while they search for longer-term, longer-lasting opportunities to remain relevant in the cybereconomy.

Figure 4 shows the outcome of a survey of CEOs some years ago indicating the types of technologies that will disrupt the world [8]. All the disruptive capabilities identified fit well into what will help Zoomify businesses in the future.

FIGURE 4

DISRUPTIVE CAPABILITY WITH THE GREATEST IMPACT ON YOUR FIRM OVER THE NEXT DECADE.



Source: Bean R. [8].

Opportunity 4: Service Industry Transformation

There is a belief that service-sector enterprises, particularly those that are very localized, are not going to be easily disrupted. Is there truth in this belief?

The reality is that service industries too will have to adapt to both offline and online strategies more quickly than before. We are starting to realize that e-commerce-related services will become a necessity rather than a good-to-have facility in the future. This reality will need supply chain services playing major roles to fulfill orders, both within cities as well as across cities and countries. In the midst of these emerging trends, the logistics service industry is bearing the brunt of the impact. How will the last mile connect with the earlier miles in fulfilling the delivery of a product or service? These are questions that service providers must tackle and resolve. Global supply chains will need to be redesigned to meet the changing habits of consumers who are shifting online, which will also be accelerated due to trade, economic, and political tension with PR China as manufacturing may become more distributed in the future.

Notwithstanding the geopolitical dynamics that envelop the logistics services industry, I believe that on-demand services will generate efficiencies and income to satisfy traditional service needs. Logistics, transportation, and supply chain-related services and management will become key to the survival and expansion of companies as alternative solutions are sought. Digital technologies and business models will drive productivity growth in the logistics service industry more than ever before, and these two key success factors will be instrumental in job creation and sustained prosperity postpandemic, even if travel restrictions and social-distancing policies remain in place for the next few years.

Livestreaming is a new customer experience in the retail industry. The service industry needs to adopt digital tools to complement traditional service models. For example, during lockdowns, gyms were closed. The innovative ones started delivering workout sessions via online videos and encouraged customers to purchase tools for home-based "gyming." Online education, hobby classes, and movie streaming are efforts by service enterprises to adapt to the new normal.

The current prediction, however, is that such disruptive digital technologies can only be harnessed successfully by large multinationals such as Amazon and Alibaba. This creates "winner-takes-most" or "winner-takes-virtually-all" dynamics, leading to market concentration and rising productivity gaps across frontier and laggard firms. How these developments affect market dynamics and competition in interconnected economies and the role modern industrial policy can play to promote structural change while maintaining a level playing field to ensure fair competition in global markets become very important questions for governments. In this case, it was not surprising for PR China's financial regulators to put a brake on Ant Financial Group's IPO, which is closely related to Alibaba and its logistics service business empire, Cainiao. The COVID-19 pandemic is likely to have an accelerating effect on these ongoing structural changes. Against this background, government action becomes even more important, and policy dialogue around these topics is timelier than ever.

Opportunity 5: Local Manufacturing/Customized Mass Production

What does the term "customized mass production" mean? What will this do to the traditional mass production concepts that prevailed during the eras of Industry 2.0 and Industry 3.0, also known as the eras of automation and computerization, respectively? In the era of mass production, manufacturing lines were designed to make products of exactly the same design, with the same features and the same specifications. Perhaps modifications in color, trimmings, and "final touches" differentiated products, but factories churned almost the same items day in and day out, and customers had little choice.

With customer sophistication, changing habits, and greater expectations, the demand for more customization of products is emerging. This is not exactly new. Companies like Dell allowed customers to "design" their own computers by selecting the number of features they wanted. After a customer submits an order, the computer is built to the exact specifications and then shipped. We will start to see accelerated demand for customized products for the reasons mentioned above.

With greater sophistication of technology, companies can now reconfigure their production lines easily to build customized products. In the era of mass production, manufacturing lines were rigid and could not be easily reconfigured daily, weekly, or even monthly. That has changed.

Robotics and 3D printing have made it possible to reconfigure a production line almost immediately. With AI and software advances, this can be done remotely and may one day be controlled by the customer. Furthermore, with technology and greater automation, the old factors of production no longer determine the cost. For example, the labor cost is expensive in countries like the USA and Singapore, making manufacturing less viable based on the concept of a manufacturing factory. But with technology, robotics, and automation, the labor cost has become an insignificant factor in the overall production cost. With further advances in technology, it is becoming cheaper to manufacture in the USA, Europe, and Singapore. If we look at the overall cost of making and delivering products to a customer across the world, that may become a cheaper option than manufacturing in PR China and shipping globally, when taking into account the logistics and environmental impacts of shipping.

The emergence of local manufacturing is an opportunity for SMEs to become centers of customized production. The flow could take the following form:

- Product specifications selected by a customer in Singapore.
- Product designed by an engineer in the USA.
- Manufacturing process specifications developed by an engineer in Japan.
- The design and machine process specifications sent securely via blockchain to Singapore.
- Singapore factory downloads design and process specifications to a robotic and 3D printing line to make the product.
- Product delivered the next day to the customer.

Local manufacturing will have multiple advantages for SMEs and countries like Singapore. It will enable companies and countries to control product supply chains to a certain extent. We all learned a quick lesson during the pandemic when governments started controlling the supply of critical medical equipment and personal protective equipment (PPE). Countries without production and manufacturing capabilities suffered and scrambled to look for new supply sources.

Local, customized manufacturing will enable companies and countries to control some parts of product supply chains, which could help ensure self-sufficiency in critical goods in times of emergency. SMEs should start looking for opportunities to bring back some production and manufacturing capabilities to their shores.

There are other benefits. The knock-on benefits are that a bigger manufacturing sector can affect other sectors of the economy and other industries. It is well known that manufacturing stimulates other economic activities. In 2018, a research associate from the University of Cambridge observed that, "Every economic activity stimulates another economic activity. Just as manufacturing stimulates the provision of services, services stimulate manufacturing production [9]. But evidence shows that manufacturing has a stronger 'multiplier effect' than services." For example, in Singapore, every 100 new manufacturing jobs also creates 27 new service jobs. However, every 100 new service jobs stimulate the creation of only three more manufacturing jobs. It is also a well-known fact that productivity in all sectors of an economy is mainly driven by innovations in the manufacturing industry. The same University of Cambridge researcher also concluded that in the USA, companies in manufacturing still employed 64% of all scientists and engineers. Also, it is important to view the manufacturing sector in the broader sense, not just in terms of direct production activities but also from the viewpoint of overall support activities that are needed to produce, deliver, and supply globally. For example, the industrial R&D, product design, and engineering services needed to keep a factory going are also jobs that can be counted as manufacturing jobs. We should not forget the supporting industries that must be located close to mass production factories and the whole range of logistics like warehousing and transportation needed.

The bottom line is that having a larger manufacturing sector will catalyze other sectors, but more importantly will be capable of creating far more jobs than most of the other sectors of the economy. Manufacturing is also a stable contributor to the GDP of any economy in addition to becoming an important sector for job creation.

It is important for SMEs to realize that we may be seeing the beginning of the "death of mass production," making way for more personalized, customized manufacturing. There is space for each economy and country to participate in such a localized, customized manufacturing era. Consider the flow mentioned earlier, from customer order, to design, to delivery: each different activity can be done in a different country. Even for a country like Singapore, with advanced research done in universities and institutes, where the government has been spending billions of dollars each year, there is an opportunity to become a prototyping factory for the world, if not for the region, for certain sectors where it commands a lead in research and technology.

What is meant by the “prototyping factory of the world”? Before items go into mass production, they need to transform from designs to “productization.” Initially, new designs require skilled workers who understand the specifications and can identify the right manufacturing processes to ensure cost-effective, high-quality, high-yielding production.

Any new design needs to be checked for manufacturability, and this is another skill that will remain important for a long time. If Singapore can be the prototyping site for all new products, then it can also determine how mass production can be achieved and help design and transfer the capabilities for mass production to any part of the world. Singapore can then remain relevant for a long time to come. This strategy can also be adopted by any economy in the Asia-Pacific region.

Opportunity 6: SMEs Need to Be Global

As mentioned earlier, how and where we design, manufacture, and sell products will become both hyperglobal and hyperlocal. In other words, “Think Global, Act Local.” This coupled with the rise of the cybereconomy will make it a necessity and not a “nice-to-have” for all companies, including SMEs. Strengthening their global footprint is a must for all SMEs. They will need to expand markets, access new customer segments, and sell capabilities all over the world. We can expect a boundaryless world, with customers seen as users who add to the database and are assets to companies.

The Internet has enabled the growth of a vast digital marketplace that has allowed customers to buy products from companies they have never heard of, from cities they have never been to. Companies have been able to do the same, i.e., reach out and sell to customers from cities they have never heard of.

The opportunity for SMEs is to immediately start acting globally. It is not easy to immediately serve a global marketplace. What should SMEs do? First, find partners who can help enter new markets. Tap all networks past and present which can help. Each government also has agencies that facilitate SMEs' overseas expansion. Organizations like the APO could play the role of matchmaker. The Internet is another great conduit to reach out to faraway places.

SMEs will also need to acquire complementary skills to become useful partners in the quest to go global. It is important for SMEs to leverage each other's strengths, local knowledge, diversity, and market understanding to successfully expand overseas. SMEs' quest to internationalize can be achieved without the need for physical offices or to set foot in the targeted foreign country. The cybereconomy enabled by the Internet can solve the distance problem and therefore the speed of global expansion will be enhanced while minimizing the cost of entering a new market. Talent acquisition too can be greatly facilitated through online channels.

Now more than ever before, startups need to scale globally immediately and be prepared to challenge established multinationals with new business models, supported by technology and skill sets that can outmaneuver competitors.

Opportunity 7: Talent Recruitment and Location

People have always been the greatest assets of any organization. The new normal will be no different. However, how talent is recruited will change drastically, and the playing field has been leveled significantly during the global lockdown experience. Out of necessity, individuals, companies, organizations, and countries have learned to operate online without the need to meet physically.

In the past, talent recruitment among big companies involved identifying the best talent from around the world and relocating them to operational sites. For example, banks operating on Wall Street required their employees to relocate to New York. To survive in New York, employees need high salaries and a space to work in. Office rentals are high, making overall company operations expensive, meaning that customers must be charged high fees, and the vicious circle of cost continues. The conventional wisdom was always that everyone must work together in the same location for maximum efficiency and productivity.

When COVID-19 hit and cities went into lockdown, we were forced to work from home. Many of us felt that it would be impossible to do so efficiently. But we were proven wrong. Just months after COVID-19 emerged, working from home has become a reality and shows how work will be done in the future. The experiences we have had so far have changed the world of work. This has been possible because of advances in ICT and the speed of the Internet. Today, not only can we work efficiently from home, but the reality is that talent can be located anywhere and work remotely and efficiently with no commuting and no relocation required.

There is an opportunity for SMEs in this. There will be a big change in supply-and-demand dynamics, especially for talent and knowledge workers. Whereas in the past, the most talented, especially local individuals, went to big companies and SMEs could not attract them, thus settling for second- or third-tier choices, with the new norm of working from home, SMEs will be able to recruit excellent talent from different parts of the world. People can also "work from the village" without traveling to different parts of the world to find employment.

What this means for SMEs is that they do not have to compete with large companies for local talent. They can employ the best from any part of the world, resulting in significant cost savings in relocation fees and large physical office space as well as home-based location salary norms. For example, an SME can hire the best software programmer in Kenya, who may be as good as any in Singapore, at a fraction of the cost.

One realization that many have had since they started working from home is that they ended up doing more work than when they worked from the office. Many became more efficient. The time saved by not commuting, going out to lunch, and taking tea breaks adds up when working from home. Employers found that managing the workforce needed new dynamics, which did not require having everyone come to the office. Instead of focusing on office hours, employers can focus on key or active contact time with employees, leaving them to do their jobs more productively the rest of the time. Employees started taking more ownership of and accountability for their work, and the need to "be managed" became less important.

For SMEs, this means having a more productive, self-managing workforce focused on outcome rather than input control and reducing the office space needed. This saves costs. Another new initiative could be job sharing, where two employees who want to work flexible hours share one job. Combined with working from home, the company has the benefit of two brains working for one salary.

Another implication of this new norm is that in the past, innovative industries tended to concentrate in expensive areas, like Silicon Valley. This may change in the future, with many pockets of innovative industries and cities spread around the world. This is not new, however. Consider the example of Estonia, a great center for innovation now serving the rest of the world.

SMEs should take advantage of the new norm of working from home to recruit and retain talent. Big companies like Google and Facebook are already planning to make work from home the norm rather than the exception, even after the COVID-19 pandemic is brought under control.

Opportunity 8: Education and Skills of the Future

COVID-19 has changed the face of education as schools learned to cope with lockdowns. As with the case of working from home, many felt that learning from home was not possible. It has become a reality today. People are now become accustomed to home-based learning (HBL) anywhere at any time with a device and Internet access.

Internet access and cheap digital devices are becoming available everywhere This means that education can reach many more people than traditional school systems. It also means there will be greater rationalization and standardization of teaching and learning content, which in turn will allow greater mobility of people across borders.

e-Learning will be able to provide opportunities to the masses in short time frames. The young who are savvy in the use of electronic and digital devices will easily adopt and thrive through e-learning platforms. Teachers need to identify the many market segments, curate needs, and develop relevant materials to impart knowledge. This does not need to be a one-way street, as today we are already getting used to large classes online with Facetime and enough monitoring tools to ensure that students are studying. We will continue to see further technological development in the area of e-learning that will soon make HBL the norm.

HBL has tremendous implications for skill training for employees, especially for upskilling large numbers within a relatively short time to address knowledge gaps for workforce transformation. It will become much easier to gain knowledge from experts from any part of the world. This has major implications for traditional formal education. Knowledge acquisition can be different, e.g., through hybrid online–offline degrees. This increases access and affordability in terms of location, time, and cost.

Finally, university degrees as we know them today may become less relevant in the years ahead. Today, university degree programs go through the following cycles: 1) The government spends one to two years studying future trends and types of industries the economy will need to develop. 2) Universities are asked to develop relevant degree programs and take one to two years to develop the curriculum. 3) Students enroll and spend three to four years studying for degrees. It therefore takes between five and eight years from the beginning to the end. At the current rate of industry disruption, what was originally thought to be “new” technology could become obsolete by the time students graduate, rendering specialized degrees irrelevant.

What is likely to happen is that the workforce of the future will find it more useful to study only relevant modules needed to do jobs well. Throughout their working life, they will return to universities regularly to gain new knowledge as their work is transformed. We are therefore likely to see less need for formal degrees but more need for modular skills related to the workplace.

What does this mean for SMEs? More industry-created knowledge will need to be converted into skill training, and specialized SMEs could drive this. We are also likely to see more value being placed on apprenticeships and internships so that future employees gain skills on the job supported by university or polytechnic courses.

While many platforms are available to facilitate e-learning, future opportunities will be far greater. There is still a huge market potential for e-learning platforms, streaming, and content development including adaptation to local contexts and languages. Finally, innovation in the e-learning space seriously lags behind the gaming industry. There are numerous opportunities to make e-learning as engaging as gaming to hold the attention and interest of learners.

Opportunity 9: Reallocation of Real Estate

In cities like Singapore, rents form a significant proportion of business costs. Office and retail space is not cheap and has been driving costs higher every year. This is about to change, thanks to the COVID-19 disruption that has forced companies to change their business models.

Permanent work-from-home arrangements for some of the workforce, with shared jobs and shared physical space, will involve a drastic reduction in the need for physical premises. We are already starting to see this among companies big and small. If this trend continues, vacancy rates will increase, and cities will see empty spaces not utilized for long periods of time. Imagine what this could mean for SME costs and cash flows.

Retail is another sector that has been greatly disrupted. Under lockdown conditions, many including older people started shopping online with comfort. Traditional shopping models must evolve due to growth in online shopping and shifts in retail practices. While the complete death of physical retail is unlikely, we may see the emergence of new models like the hybrid online–offline concept, with some physical space supporting a much larger cyberspace.

In the residential space, with more people working from home, we will see the need to redesign housing to accommodate not only the new environment but also social distancing and provide personal, recreational, and hobby space. With the rise of e-commerce, more warehousing and redistribution hubs will be required to adapt to new supply chain structures, for example, by locating near customers.

Overall, we can expect to see a huge reconfiguration of the real estate market in coming years, and SMEs must identify which side of the curve they are on. If they own huge real estate spaces, they may find underutilized space and want to divest some of it. If they are renting space, they may want to learn how to use it more efficiently so that the cost of renting or real estate is decreased drastically. SMEs should be proactive in managing changes in how space will be utilized soon.

Opportunity 10: Food Security

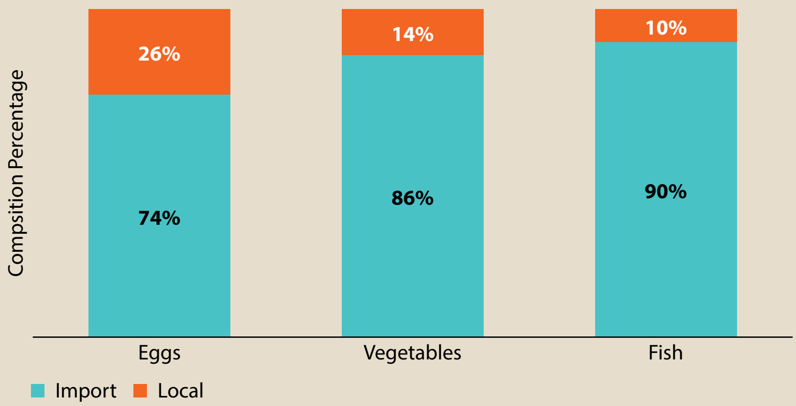
The tenth area of opportunity emerging around the world is in food security. Long queues formed in many grocery stores, markets, and supermarkets when the fears of extended lockdowns created panic. Many countries and cities like Singapore that do not enjoy self-sufficiency in food realized how vulnerable they were without local farming. But farming requires huge tracts of land, and countries like Singapore cannot possibly make traditional agriculture viable. The other issue is sustainable farming, which was already being tackled before the COVID-19 pandemic hit. Old methods of farming were depleting resources and causing climate change. The world was already working on sustainable farming solutions and making good progress.

How can cities and countries like Singapore develop self-sufficiency in basic food? Is it even possible? Here lies the opportunity for SMEs: Urban farming is now becoming a reality. Thanks to technological advances, farming no longer relies on large tracts of land. While a lot of space is still needed, it does not have to be horizontal. Just as land-scarce Singapore solved the housing problem by building high-rise flats, high-rise or vertical farming represents a solution.

The Singapore government developed a plan for food security, the Singapore "30 by 30" plan, with the target of producing 30% of national nutritional needs through local production by 2030. At the end of 2019, the sources of three basic food items were as shown in Figure 5 [10]. Except for eggs, where 26% of demand is produced locally, fish and vegetables are highly dependent on imports.

FIGURE 5

SOURCES OF BASIC FOOD ITEMS IN SINGAPORE.



Source: Singapore Food Agency Annual Report 2019/2020 [10].

The Singapore example shows that with advances in technology, it is possible even for a fully urbanized city anywhere in the world to attain a degree of self-sustainability in food. The idea is to produce food near customers rather than to ship it to distant locations. Savings in logistics and refrigeration costs can be tremendous when following this traditional practice.

SMEs should seriously consider urban vertical farms. They could enter urban farming directly or supply the tools needed by urban farmers. To give some example of "tools," water and energy are the most expensive inputs for urban farming. SMEs can examine technologies to produce and recycle water. Instead of using electricity from the grid, SMEs could produce local power, whether through solar, wind, or other hybrid sources that are becoming available.

There are other areas of food supply in which SMEs could become involved. For example, "artificial meat," which is mainly plant based, has a huge potential. Fish by-products can also be used to "print" meat, which is rich in protein, using 3D printing technologies.

There is enough room for many players to succeed, as urban farming is in its nascent stages. SMEs should identify their strengths and prepare to pivot their business models to find a role in the new normal of sustainable urban farming.

Another big issue in food security is waste. According to the UN Food and Agriculture Organization, total annual food wasted amounts to USD2.6 trillion, or about one-third of total annual production [11]. Imagine the improvements in food security if we could save even half of that waste. SMEs should work with universities to develop technologies that can help reduce food waste at different stages, from farm to fork.

One result of the pandemic-related lockdowns was restaurant closures. There was a sudden boom in home meal deliveries. Restaurants scrambled to find ways to serve quality food to customers at their homes and found that a bottleneck was packaging. The famous Chinese hotpot chain Haidilao lost customers in its restaurants, even after lockdowns were lifted, because eating from communal shared containers was still prohibited. Haidilao started delivering food in specialized packaging and offering an actual hotpot along with a portable stove and butane fuel. This increased business significantly during the lockdowns as well as later, as people became used to the new normal of eating at home.

There is a lesson we can learn from the gold rushes of the past. During those times, the companies that had sustainable businesses and profits were tool suppliers, like sellers of shovels, picks, and mining pans. While prospectors were speculating, some succeeded and others failed, but the tool suppliers continued to make money. This is another area for SMEs to focus on: supporting the food industry with the expertise they may already have. SMEs should start looking now for opportunities to participate in different value chains in the food security field.

CONCLUSION

While the world is undergoing unprecedented changes caused by the COVID-19 pandemic, SMEs should look beyond the immediate problems and challenges to understand what the new normal will look like. I see unique opportunities for countries, companies, and individuals to find new spaces to thrive in the future. Another way to look at the current situation is that the world is seeing a "resetting" event. Winners in the past may not necessarily be winners in the future. New winners can emerge if they do the right things and look for opportunities amid the challenges. After the reset, the space of individual SMEs will depend on the actions they take today to prepare for the new normal. Everything is up for grabs, and I hope that this paper introducing 10 opportunities that will arise post-COVID-19 will be useful for SMEs to develop new business models and plans.

In my next Productivity Insights paper, I will share the 12 steps to help Asia-Pacific SMEs get back on track. This is based not just on my personal experience as a serial entrepreneur working through the toughest recessions in recent history but also grounded on research I did and through analyzing various articles on how companies survived and did well during any recession in history. I have come to realize that the one differentiating factor that helped these companies is that almost all of them had a survival master plan either before they went into the recession or developed one as they survived the recession. Each had its own tailored master plan. Some of the things they did were the same as others, while many others were unique. Underlying all these strategies, however, were fundamental but critical steps to ensure survival.

Approval of a highly effective vaccine has unequivocally marked the beginning of the end of the COVID-19 economic turmoil and the beginning of the postpandemic recovery. The road to full recovery out of the current crisis, however, will be long and arduous. But, in a crisis, there will always be opportunities. I speak from personal experience when I say this: I started working in 1985, when the world fell into one of the worst recessions. As an entrepreneur, my business also went through the oil crises in the 1990s, the Asian financial crisis, and the global financial crisis. I saw one more meteoric impact on my business in 2014 to 2105, which was the debacle of the oil price plunge in Africa, leading to the collapse of currencies in Nigeria and Angola. I learned a lot from these experiences by tapping the opportunities available. If we analyze what all of the winning SMEs and companies that not only survived the worse crises but also did well and thrived thereafter, we will see common strategies that are worth emulating. These winning strategies will be the ingredients of the survival master plan. These steps will then decide whether SMEs survive or flounder in the next normal.

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