

Moving the Needle

...the journey from policy to implementation...



September 2023



Dear readers,

In this edition of Moving the Needle, we are pleased to feature Col. Ali Akhtar Jafri (Retd), the former Director General of Manufacturers Association of Information Technology (MAIT). Col. Jafri shares his insights on how manufacturing, especially in the electronics or the broader technology sector, can evolve and what are the key focus areas that need concerted deliberations.

We discuss how the employment landscape is changing with economic growth. We also share thoughts on how technology is evolving exponentially – be it data science in social sector, or generative AI in the BFSI sector, or the gaming revolution itself – and how that can be leveraged for the growth and development of the country. The infrastructure sector is growing rapidly and so are the means of financing, including the infrastructure bond market. Open skies agreements and Industrial Licensing are two important areas in their respective domains viz. civil aviation and defence – and both need to evolve with changing times to be more efficient in achieving objectives. With all the growth happening at every strata of the society, it is important to ensure that health does not become unaffordable and hence, diagnostics as a field in healthcare, requires the due attention of stakeholders as well.

We hope you find this edition a valuable read and look forward to your inputs and suggestions.



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01 – Policy Square

Policy Square | A Primus Partners initiative to understand the more fundamental questions in policy making

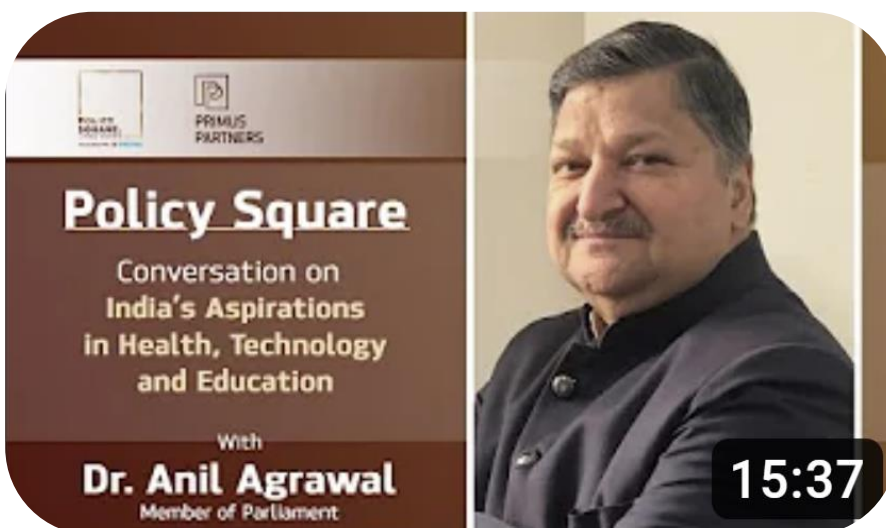
Primus Partners on 28th December 2021, launched **Policy Square**, in association with Businessworld.

Policy Square, an initiative by Primus Partners, is a monthly expert interview series wherein key constituents of the public policy ecosystem – senior policy-makers, civil society members, business executives etc. – are interviewed on critical issues and policies of national importance to explore

their impact on the country and industry at-large.

The motivation for the Policy Square series is driven by Primus Partners’ rich policy-regulatory knowledge, as well as experience of delivering projects across multiple sectors, with an aim to leverage this knowledge, and create a platform to table in – depth discourse.

With this initiative, we have attempted to engage with experts at various levels within the country’s ecosystem. Each expert has brought in a new perspective – all towards enabling India’s growth both in absolute and relative terms.



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Dr Anil Agrawal, Member of Parliament, Rajya Sabha

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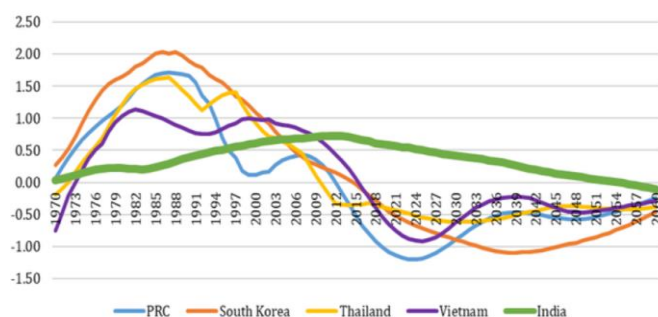
भारत 2023 INDIA

02 – Economy

India's employment landscape amidst economic growth

India holds a distinct advantage in the labour market as compared to other countries, because of the majority of the “working” demographic dividend. The country is on track to become the third-largest economy in the world, however, trends and patterns in economic growth do not guarantee growth in job opportunities in a just manner.

Graph: Demographic Dividend: India vs Others



Traditionally as per **Okun's Law**, 'a decline in unemployment by 1 percentage point corresponded to a 3% rise in output'. The variables of economic growth and unemployment are considered to be two sides of the same coin: when economic activity is high, more production happens overall, and more people are needed to produce a higher amount of goods and services and vice-versa. However, a shift in the pattern of employment has been seen in recent years. While half of India's population is below the age of 26, the increasing demand for jobs is not being met by the creation of sufficient new economic opportunities. As per the **Employment Exchange Statistics 2023**, the highest number of jobseekers registered on the live register was for the age group of 20-29 years during 2022 (46.4%). One important reason for India's endemic unemployment despite high growth is the leapfrogging from a primarily agrarian economy to a booming services economy.

Therefore, various initiatives such as Make in India, Production Linked Initiative Scheme, PM Gati Shakti, etc. are acting as a catalyst to increase manufacturing in India, which will in turn increase formal employment in the economy. The Quarterly Employment Survey (QES) reported that the 'Manufacturing sector continues to be the largest institutional employer in the country, employing 38.5% of the total number of workers.

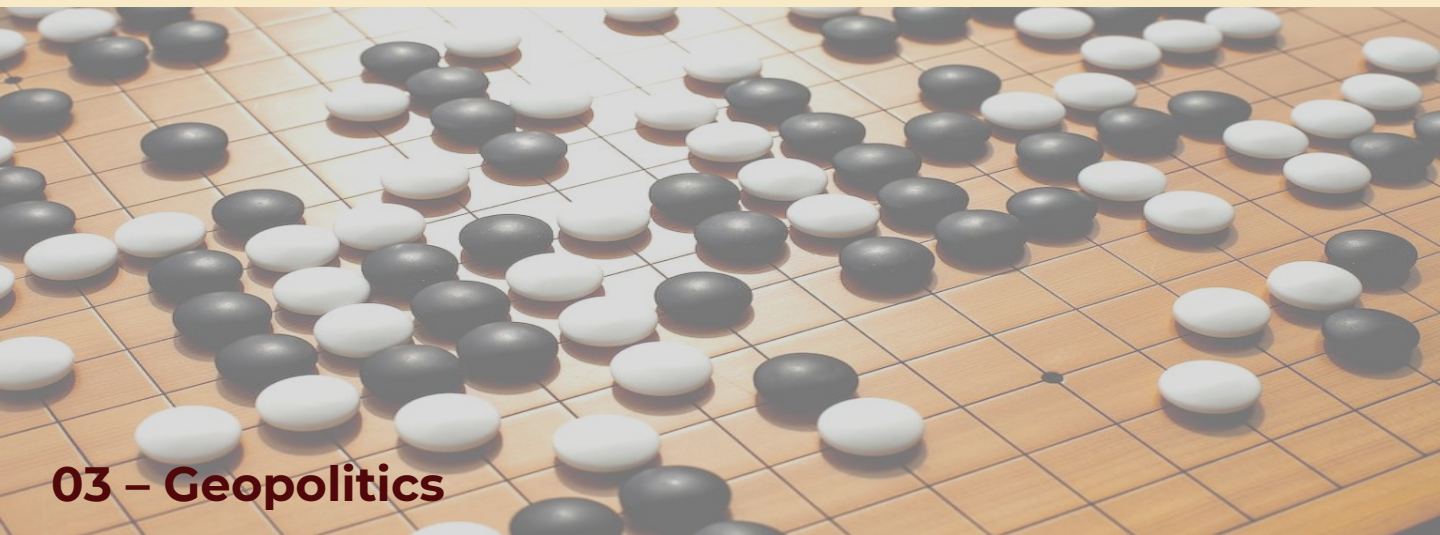
With the Government taking favourable initiatives to increase manufacturing in India, there has been a shift in the pattern of employment in recent years with self-employment going up in both rural and urban areas. It is therefore important to understand the character of the informal sector (and changes therein in recent years) absorbing a major part of the growing labour force, to assess how these would impact productivity, wages and quality of life of both people engaged in formal and informal sectors. As 'formalisation' cannot be seen as a 'one-size-fits-all-solution', a multi-pronged approach will be needed.

Firstly, the country has seen a disproportionate share of microenterprises, with majority companies employing fewer than 10 workers. To help micro and small enterprises that account for a major share in the economy, it is important to boost investment in human capital through education, skilling, and health that will enhance the entrepreneur's competitive capability and the talent pool available for employment in the sector.

Secondly, it is important to create efficiencies through digital and services-based economy as till date approximately 90% of employment generated is in the informal sector. The adoption of digital technologies and the emergence of digital platforms, such as in e-commerce and digital financial systems, are improving the business viability of such enterprises in country. As this continues, increased self-employment and contractual workforce will need new models of social security and social benefits that are typically linked to employment and should be accessible to individuals directly.

Thirdly, learning from other countries' forward-looking policies and to empower the youth in terms of their education, skills and health choices. India should take an updated state-wise ranking of National Transfer Accounts (NTA) assessment which will help in understanding the country's per capita consumption pattern and would capture the progress made on such investments.

In the ever-evolving landscape of India's labour market, the promise of a burgeoning demographic dividend stands as a beacon of potential. Yet, as we traverse this path, it is evident that conventional paradigms might not suffice. The fusion of economic progress with equitable job creation requires an astute understanding of the changing nature of work and focus needs to be given on MSMEs, digital technologies, education and skills of the youth.



03 – Geopolitics

Open Skies Agreement – important to appropriately leverage

With the liberalisation of world trade and the Indian economy, the 90s brought in with them a global attempt to liberalise the air space, a result was the Open Skies Agreement (OSA). These are bilateral and multilateral agreements signed between countries allowing airlines to provide international passenger and cargo services between the respective countries' national airports.

The agreements were instruments to loosen the existing protectionism in the aviation industry and minimise government control. With the signing of the OSA, airlines of signatory countries could operate freely with lesser restrictions, to host city airports ensuring greater market access, routing opportunities and capacity building. As per recent estimates, the aviation sector has reported a passenger saving of upto \$4bn and reduction in fares upto 15%, owing to the OSA.

With no restriction on the number of flights and the number of stops that the countries could undertake, airlines had the freedom to operate at greater frequency based on market opportunities and maximise profit margins. This only gave airlines complete stake in decision making in matters of pricing, routing and passenger onloading capacity of the said vessel.

However, the degree of sky openness to be availed by signatory countries is decided through mutual agreements and is based on the 1944 Convention on International Civil Aviation Organization.

The first freedom of Air allows an air vessel to take off from its home state whereas the second one permits landing in the host state airport. The second freedom allows the right to refuel or carry out maintenance in a foreign country without embarking or disembarking passengers or cargo. The third and fourth freedoms allow for take-off from where the vessel had landed and land at home base. The fifth and sixth freedoms give airlines the right to pick up passengers from one country and take them to a third country, other than the port of departure of the airline.

The OSA has been successful in providing direct monetary benefits for the business operators, but there have also been economic benefits for the countries at large by allowing airlines to invest in / own stakes in the airlines of the other

country. A very successful case study of such an opportunity is of the partnership between Tata Group and Singapore Airlines to operate Vistara airlines, which redefined aviation hospitality in the Indian aviation market. Such opportunities also opened up avenues for better training and induction programmes with the cabin crew now being trained in different countries with greater exposure to world class modules.

India's National Civil Aviation policy allows for OSAs to be signed with SAARC nations and countries beyond 5000 km radius of New Delhi. For the rest, India gets into bilateral Air Service Agreements (ASA) which do not permit infinite number of flights. Currently, India has aviation agreements with 116 countries including Bangladesh, the US, UK and UAE. Most recently, UAE has expressed its desire to upgrade the ASA between the two countries to an OSA.

Open Sky Agreements have added extra wings to the fate of the aviation industry. Apart from the numerous monetary and economic benefits that have been listed, they have also increased the tourism potential, at large. Greater direct connectivity between cities has encouraged people to undertake travel to unconventional places.

Flexibility of timings, code sharing and partner alliances have also resulted in greater customer satisfaction. The success of the OSA also lies in 90 countries having adopted to such an agreements with close 250 bilateral pairings.

Open skies agreements also sometimes result in certain areas which require consultations. For instance, where basis agreements a certain number of RPKs are to be operated in certain sectors, foreign airlines having larger fleet and flight frequency maybe able to meet the demand while the domestic airlines may not be able to. This creates an unequal partnership and gradually can result in erosion of market share as well. Hence similar important points need to be taken into consideration when discussing, formulating, and executing such agreements. While OSAs do result in long lasting relationships, it should be framed in a way to ensure that scope for additional capacity is not missed. Hence, the business case of such agreements should be growth oriented – looking towards larger in bound and out bound international traffic.



04 – Infrastructure

India's Infrastructure Bond Market

The credit risk profile of infrastructure bonds in India has seen substantial improvement, making them attractive investments for bond market investors. This improvement is reflected by various policy facilitations and structural changes within the Indian infrastructure sector. These developments have led to a more amenable environment for debt instruments tied to operational infrastructure assets in the bond market.

Entities rated AAA and AA have increased from ~22% in fiscal 2017 to about 46% in the CRISIL Ratings infra portfolio during the last fiscal year. This improvement is further emphasized by the growth of FDI in domestic infrastructure sectors, which attracted over \$74 bn in the past five fiscal years.

Factors Contributing to this Improvement include:

Government Reforms: The government has introduced a series of policy facilitations and reforms to address legacy issues in the infrastructure sector. These policy changes have significantly improved the attractiveness of the Indian infrastructure sector, making it a robust investment destination. By modifying risk-sharing in contracts, removing bottlenecks, and implementing measures that improve confidence, the sector's appeal has markedly risen.

Equitable Risk-Sharing: More equitable risk-sharing arrangements between concessioning authorities like the NHAI, the Solar Energy Corporation of India (SECI), and private developers have increased the sector's allure. NHAI's contribution of up to 40% of the project cost under the hybrid annuity model (HAM) during the construction phase significantly raises its stake, thus providing greater security for private investments.

Predictable Payments: Central counterparties such as NHAI, SECI, and NTPC have played a crucial role in ensuring predictability in payment cycles. This reliability has reduced investor uncertainty.

Infrastructure Investment Trusts: InvITs have emerged as a significant instrument in the infrastructure sector, aiding in leverage reduction and broadening ownership. This has facilitated investment by making the sector more accessible and appealing to various investor categories.

Insolvency and Bankruptcy Code: The introduction of the IBC and pre-IBC platforms has expedited the resolution of stressed assets. This has not only enhanced recovery prospects but also shortened the resolution timelines for operational infrastructure assets.

Growth and Attractiveness of the Infrastructure Bond Market

FDI in domestic infrastructure sectors has surpassed \$74 billion in the past five fiscal years. This influx of foreign capital adds to the growth and attractiveness of the infrastructure bond market in India, underlining the sector's long-term prospects.

The overall market setting is favorable, marked by easing inflation, steady-to-falling interest rates, high comparative growth rates, and healthy corporate capacity utilization. The domestic bond market saw approximately Rs 8.2 trillion raised in 2022-23, and it's expected that a new record of Rs 9 trillion could be set in the current financial year, 2023-24.

Outlook for the Infrastructure Bond Market in India

The surge in the issuance of infrastructure bonds suggests a promising trend for the current financial year 2023-24. Factors contributing to this optimistic projection include easing inflation, steady-to-falling interest rates, and a generally favorable environment for fundraising, particularly in physical infrastructure.

Despite initial reservations and liquidity risk concerns due to asset-liability mismatches in infrastructure financing, banks continue to be significant lenders to the sector. Recently, banks have shown a growing inclination towards infrastructure bonds, with major institutions like the State Bank of India taking the lead. This trend is expected to gain momentum, thus contributing to the development of a yield curve for long-term bonds and promoting growth in the infrastructure bond market.

The rise in infrastructure bond issuances is likely to create a buoyant environment for both infrastructure development and investment, setting the stage for robust growth in the infrastructure bond market in India.

05 – Technology

Gaming revolution in India

The online gaming industry in India has gone from close to non-existent in the 1990s, to becoming a significant market today globally. The past three decades have witnessed Indian gamers start from coin-operated arcade game machines and handheld consoles, gradually moving to home consoles, cyber-cafes and PCs, to eventually growing into a mobile gaming-driven market. Cyber cafes also contributed to the growth of India's video game market in the early 2000s. In 2008, there were 180,000 cyber cafes, but by 2017, the number declined to 50,000 due to licensing issues. Today, the online gaming industry is valued at around \$2.6bn and is expected to double by 2025. Mobile gaming accounts for over 85% of total segment revenues, while the remaining 15% comes from PC and tablets.

What are the drivers?

Several factors have fueled the growth of the gaming industry in India, especially the mobile gaming segment in the past 5 years. The most significant catalysts have been the increase in wireless internet users, the expanding smartphone user base, and the technology infrastructure development. The simultaneous launch of 5G across circles, without having to replace sim cards, ensured high availability and affordability of high-speed internet. The widespread adoption of the Unified Payments Interface (UPI) has facilitated quick and easy in-app purchases.

During the COVID-19 lockdown, there was an unprecedented increase in the number of mobile gamers in India. Between April 2019 and June 2020, Google Play Store saw a 51% increase in mobile game downloads and the iOS App Store saw a 20% increase. Within the first 9 months of lockdown in 2020, India became the largest consumer of online games with 7.3 bn downloads. India is currently one of the top five mobile gaming markets in the world and the largest mobile gaming market in terms of app downloads.

According to industry experts, Indian gamers are spending around \$250mn annually on in-app purchases of popular games. This spending has surpassed the combined revenues of OTT streaming platforms in India.

Game development ecosystem

The video game development ecosystem is still underdeveloped in India compared to other Asian countries such as China, Japan, and South Korea. But the growing number of gamers in India has attracted interest from gaming development companies. Global game studios such as Ubisoft and Microsoft Games have opened offices in India, while local Indian game studios are also growing.

In 2009, there were only 15 game development studios in India. As of 2021, there are 15,000 game developers and 275 game developing companies in India. Gaming companies in India have a wealth of engineering and product management talent, but there is still plenty of room for growth in the creative aspects of game design, art, and storytelling. The release of world-class gaming titles from Indian studios is a promising sign of the times to come and for the exciting future of the industry.

Future outlook

Indian gaming companies have raised over \$2.8bn from domestic/global investors in the last 5 years. India has also produced 3 gaming unicorns: Game 24X7, Dream11 and Mobile Premier League. While there is significant interest from investors and a sizeable target market, the future industry growth shall largely depend on navigating certain challenges such as perception of considering gaming as a career option, low paying player ratio and ARPU, as well as policy and regulatory uncertainty. With robust consumption from a young population with rising disposable incomes and innovations around monetization models for gaming companies, the online gaming industry is expected to witness unprecedented growth in the medium to long term horizon.

06 – Aerospace and Defence

Industrial Licenses – imperative to streamline

In the intricate landscape of India's defence sector, industrial licensing emerges as a pivotal bridge between innovation and security. However, this gateway demands a revitalized approach that embraces user-centricity to cater to the ever-evolving demands of modern warfare and technological advancement for fostering the defence manufacturing eco-system in the country.

By infusing simplicity and efficiency, the Indian defence sector can stride confidently into the future while safeguarding national interests. The roadmap for achieving a further streamlined and efficient licensing ecosystem, the following measures can be incorporated :

Further Simplification:

Clearly defining and communicating the criteria for obtaining licenses ensures that the industry understands the pre-requisites for licensing. Further establishing a dedicated centralized authority for overseeing the entire process would help in ensuring consistent guidelines across the ecosystem. It will help to have a clearer list of products in the list for IL requirements

Going digital:

Going back to a seamless digital platform for license applications, documentation and tracking purposes can significantly reduce paperwork, processing time and possibility for errors. Such a system would simplify the application process, bridge communication gaps, facilitate real-time updates for applicants and enhance transparency and efficiency.

Risk-Based Categorization:

Adopting a tiered categorization system, attuned to risk stratification, to evaluate projects based on their potential security implications will enable expedited approvals for low-risk ventures while rigorously scrutinizing high-impact endeavours. The fusion of precision and personalization is the essence of a refined licensing framework. Especially when it comes to non-critical or non-lethal items like optical equipment

Expedited Approval: Accelerating the Growth

Fast-track licensing for companies engaging in strategic partnerships with the government and incentivizing collaborative ventures that contribute to R&D and

technology transfer will encourage private sector involvement.

Global Best Practices: Navigating by International Stars

Guided by the compass of global benchmarks, India's licensing protocols must synchronize with international standards. Alignment with global norms can facilitate international collaboration, technology exchange, and joint ventures, ultimately contributing to the growth of the domestic defence industry. Extended HS classification-based mapping would be important to ensure there is provision for flexibility within the list as well.

Security Oversight: Safeguarding Treasured Accountability

Amidst the symphony of transformation, the sanctity of security remains non-negotiable. Stringent security protocols, robust audits, and periodic reviews form the ensemble that preserves the integrity of the sector. Bolstering security protocols will ensure that sensitive technologies and classified information remain safeguarded. This vigilance is the cornerstone that ensures the nation's technological treasure remains impenetrable and secure.

Regular Review: Evolving with Time

Periodic review and revision of the licensing framework by regular consultation with defence industry stakeholders can address concerns, identify bottlenecks, and ensure that the licensing framework remains responsive to industry needs. Flexibility in the licensing process ensures that it remains relevant and effective in the face of rapidly changing defence landscapes.

The convergence of a streamlined licensing framework with recent strides in the Indian defence industry promises a resurgent future. This transformation beckons a defence sector that stands strong on the global stage while remaining rooted in its indigenous capabilities. By simplifying and enhancing this process, India can usher in a new era of efficiency, transparency, and collaboration.

Simplified IL related processes and procedures would ensure that the industry, while meeting domestic requirements, is able to more efficiently compete in the international market as well.



07 – Healthcare

Diagnostics – a “neglected” sector that needs to be made more affordable

India has made significant advances in its promise to ensure Universal Healthcare coverage by 2030. Given the nation’s commitment to ensure quality healthcare for all, diagnostics has emerged as a critical area of interest for the public and private sectors. Accessible and affordable diagnostics facilities have become especially important in the post-COVID era.

The Indian diagnostic market has grown by leaps and bounds in the past decade. The rising prevalence of chronic and lifestyle-related illnesses such as hypertension and diabetes has contributed significantly to this growth. Increasing awareness about preventive healthcare and the growing proportion of elderly individuals in the population are driving the demand for diagnostic labs in India.

Furthermore, the expansion of health insurance coverage has meant that people are getting regular health check-ups and diagnostic tests.

Presently, doctors rely on diagnostic reports in 75% of cases to prescribe treatments. Innovative diagnostic techniques such as molecular diagnostics, genetic testing, and precision medicine emphasise on the accurate detection of diseases, leading to better patient outcomes and increased savings.

For instance, precision medicine tailors treatments to individual patient needs, minimizing side effects and enhancing health results. This approach has the potential to reduce hospitalizations by 21% and healthcare expenses by 25%, showcasing the vast potential benefits of an organized diagnostic landscape.

Keeping in mind the critical role of diagnostic services in building an efficient healthcare system, the Government of India launched the Free Essential Diagnostics Initiative, under the National Health Mission, to address the high cost of diagnostic testing. In 2021, the Pradhan Mantri Ayushman Bharat Health Infrastructure Mission was launched to strengthen health systems and institutions.

The Mission seeks to establish a network of laboratories at block, district, regional, and national levels. The Health and Wellness Centres set up under Ayushman Bharat also offer free essential drugs and diagnostic services.

Despite these efforts, a key problem posed by the diagnostic sector is the highly fragmented nature of the industry. Most diagnostic laboratories function in silos, with several diagnostic services being available only in tier-1 cities. The absence of regulations to enter and ensure quality of services has led to an exponential rise in the number of unaccredited labs in India.

Lab accreditation is largely a voluntary self-regulating mechanism that focuses on the quality of the equipment. While accreditation is in some ways an indicator of quality services, the percentage of accredited and pathologist run labs is very low.

Most of these accredited labs function in urban areas and are often unaffordable for the larger population. Additionally, there is a severe paucity of skilled quality-control personnel in laboratories to ensure quality is maintained year round. Even if diagnostic technicians are trained, their skill set must be updated regularly.

Public-Private Partnerships (PPP) can prove to be transformative tools in reducing costs in diagnostics. These partnerships can be leveraged to upgrade technology in government health centres and hospitals.

A notable example of a successful partnership has been in Chandigarh to reduce waiting times and rates of diagnostic procedures such as CT Scans and MRI scans in the Government Multi-Speciality Hospital. The costs of these scans are now nearly half of those charged by private hospitals.

In order to reach its full potential, the diagnostic sector must embrace the use of Information Technology and Artificial Intelligence (AI). Several med-tech solutions are making diagnostics of complex diseases accessible and affordable, even in rural areas.

For instance, AI can help in automating the interpretation of test reports, thereby addressing the gaps that exist as a result of the lack of skilled personnel. These solutions can critically help in enabling early intervention.

Extensive government efforts are required to develop a regulatory framework for diagnostics laboratories and ensure the quality of services. The industry must embrace the use of AI and other technologies. Affordability and accessibility are two key problems which need to be addressed in ensuring a robust and efficient healthcare system.



08 – Financial Services

Generative AI in BFSI

In recent years, the convergence of cutting-edge technology and the financial sector has given rise to remarkable advancements, and one of the most transformative innovations on this journey is Generative AI. This is a rapidly growing field of artificial intelligence that can create new data, such as text, images, and music. The Banking, Financial Services, and Insurance (BFSI) industry, known for its intricate data-driven operations and decision-making, has found a revolutionizing ally in Generative AI.

In the report, 'Harnessing the value of generative AI: Top use cases across industries', by the Capgemini Research Institute, as of April 2023, 40% of organizations across industries in India have established teams and budget for AI, with a further 49% contemplating doing so within 12 months. This highlights the extent of acceptance and interest in harnessing the power of Generative AI in India.

Personalized Customer Experiences

Traditionally, financial institutions faced challenges in providing 24/7 assistance as well as personalized advice. However, with the advent of Generative AI-powered virtual assistants and chatbots, customers can now engage in natural conversations to access account information, seek financial advice, and resolve queries. These AI-driven interfaces lead to higher levels of customer satisfaction and loyalty.

Tailored Financial Planning

With the ability to analyze vast amounts of customer data, including spending habits, income sources, and future goals, AI algorithms can generate bespoke financial plans, whether it's planning for retirement, investing in the stock market, or managing debt. This tailored approach enhances customer trust and confidence in the financial advice they receive.

Revolutionizing Risk Management and Fraud Detection

AI algorithms can simulate and model various risk scenarios, enabling financial institutions to stress-test their systems against potential market shocks. Moreover, Generative AI's pattern recognition capabilities are vital in fraud detection. By analyzing transaction patterns and identifying anomalies, AI systems can proactively detect and prevent fraudulent activities, safeguarding both institutions and customers from financial losses.

Transforming Credit Underwriting and Lending

Traditional credit evaluation methods often relied on a limited set of data, potentially excluding creditworthy individuals. Generative AI analyses a broader range of data, including digital footprints and online behavior, to assess creditworthiness more comprehensively. This approach allows

lenders to make fairer lending decisions, expanding access to credit for a more diverse customer base.

Algorithmic Trading and Investment Strategies

The ability to process vast datasets in real-time, AI-powered algorithms excel in algorithmic trading. These algorithms can execute trades based on predefined criteria, responding to market fluctuations swiftly and efficiently. Additionally, Generative AI can assist fund managers in generating potential investment scenarios, enabling them to make more informed decisions and optimize portfolio performance.

Embracing Regulatory Compliance and Reporting

Generative AI is offering solutions by automating compliance processes. By analyzing regulatory frameworks and extracting relevant information, AI systems can ensure institutions adhere to regulations while minimizing the risk of non-compliance. This automation streamlines reporting procedures, freeing up human resources for more strategic tasks.

Bolstering Cybersecurity

The BFSI sector is a prime target for cyberattacks due to the sensitive nature of financial data. Advanced AI models can identify vulnerabilities in systems and networks by analyzing patterns of potential threats. This proactive approach enables organizations to address security breaches before they escalate, safeguarding customer data and institutional integrity.

Ethical Considerations and Bias Mitigation

While Generative AI presents a world of opportunities, its deployment in BFSI comes with ethical considerations. Ensuring fairness and mitigating bias in AI-driven decision-making processes is paramount. Organizations must actively work towards transparency and accountability in AI systems. Regular audits and ongoing monitoring are necessary to prevent unintended discrimination and ensure ethical practices are upheld.

In conclusion, Generative AI is reshaping the BFSI sector in profound ways. From personalized customer experiences to risk management, fraud detection, and beyond, its potential is boundless. As the industry continues to embrace technological advancements, it's imperative to strike a balance between innovation and ethics. The use of Generative AI is still in its nascent stage but it holds the power to revolutionize the industry. By harnessing the power of Generative AI responsibly, the BFSI sector can usher in an era of enhanced efficiency, inclusivity, and security for all stakeholders involved.



09 – Impact

Leveraging data science in the social sector – where technology meets welfare

Over the years, with innovative approaches and effective strategies, social sector interventions have managed to reach out to the most marginalised sections of the population to create a lasting impact on communities and society as a whole. In recent years, the social sector has used data analytics to make informed decisions and design evidence-based interventions. It focuses on leveraging the power of data to address real-world problems, from gaps in learning outcomes to climate change, thus bringing meaningful difference in the lives of individuals and communities. Thriving on collaboration between different fields such as technology, policy, social science and more, such data-driven insights often lead to efficient resource allocation and outcome-oriented interventions. These interventions have the potential to be scaled up and applied to broader contexts and becoming sustainable in the long term.

The Covid-19 pandemic showed how crucial data science in healthcare can be. During the pandemic, data was extensively used for tracing contacts, predicting hotspots where Covid would spread, analysing trends in the spread of the infection, and how government policies could be designed so that appropriate measures could be taken to curtail the spread of the virus. Data was also used for the management of beds in hospitals and supply of essential medicines to patients at large. Similarly, technology-enabled devices are being used to diagnose health issues and analytics are being used to predict footfalls across health facilities, spread of disease patterns during various seasons within the country, demand for various medicines month – by – month at various medical centres among many others for assessment. With the help of such insights, coordination with authorities ensures providing timely interventions and resources to the most impacted areas.

On the other hand, the Ministry of Education has been working to improve access to education over the past few decades with the introduction of the National Education Policy (NEP) 2020, promotion of e-learning through technological platforms like DIKSHA and increase in allocation of government spending in the Union Budget. The National Achievement Survey (NAS) and Annual Status of Education Report (ASER)

are nationwide surveys that capture the status of children’s enrolment and gaps in learning outcomes in rural India every year. With the immense data collected, the reports provide insights and indicators to empower educators and policymakers to understand the current and historical status. These insights are further used to devise policies, strategies and in decision-making.

One such example is Vidya Samiksha Kendra, developed by the Department of Education, Gujarat. The State has developed a mechanism to conduct large-scale monitoring through using technologies such as AI - ML and Big Data Analytics to monitor the learning progress of every student across every grade in every school, thereby improving grade-appropriate learning outcomes of every student. Vidya Samiksha Kendra received the Prime Minister’s Award for Excellence in Public Administration, 2021 and was also deemed a global good practice by The World Bank.

An interesting use case is Kutumba, an IT-based platform for improving ease of access to government benefits to the poor, bringing about inclusive growth in the state of Karnataka. Based on data, the system identifies families/individuals who have not received benefits. The data also helps to understand the impact of welfare schemes in the improvement in socio economic status.

Another area where data has been used effectively in the social sector includes the Bengaluru Traffic Police analysing traffic flow data, weather information, and real-time inputs from CCTV cameras to optimize traffic signal timings and deployment of personnel, resulting in improved traffic management, analysing urban data to improve transportation systems, and using satellite imagery to monitor and manage environmental resources.

Data science for the social sector is a commitment to harness the immense potential of abundant data available to create positive change. By adopting ethical guidelines, fostering collaboration, and applying insights across domains, data scientists can drive innovations that reshape a better future for individuals as well as communities at large.



Col. Ali Akhtar Jafri (Retd)

– Former DG, Manufacturers Association of Information Technology (MAIT)

An Army veteran, Col. Jafri has donned many hats in various capacities across the Government and non-profit organizations.

His most recent responsibility was as the DG of MAIT where he was leading all industry engagements while ensuring efficient operations and strong compliances at MAIT

There is a strong case for incentives to be mapped to actual throughput instead of just on capex levels. What are your thoughts on the same and how do you think this can be implemented?

Incentives that are mapped to actual throughput rather than just capital expenditures (capex) can provide a more comprehensive and performance / outcome-oriented approach to driving productivity and efficiency in various industries.

By focusing on actual throughput, which refers to the rate of production or output of a process, system, or organization, these incentives can encourage better resource utilization, process optimization, and overall effectiveness. This will also ensure benefits across the strata of the economy including alignment of goals as well as performance with the broader entity's objectives, ensuring efficient and optimal utilization of resources, adaptability within the ecosystem as well as giving a push to innovation as these would result in indirect incentivization of the work force for increased output and / or better efficient.

In one sense, production schemes incentivize production and production in turn gets verified by sales. Thereby, an element of throughout and capex is already built in the current incentive schemes. However, capex requirements can be evaluated and possibly removed or at least relaxed. This argument also makes a compelling case because this will ensure that companies who have invested in new capabilities and capacities do not need to reinvest to be eligible and / or take the benefits from schemes such as the PLI. This will ensure that existing capacities are used to the fullest while a more thought-out plan is developed towards enhancements of the same.

The industry has always insisted on delinking incentives from capex in general. However, even hybrid models involving incremental investments have gaps that require adjustments. It is important to note that in today's fast changing times, one shoe will not fit all. One needs different structures for different scenarios and each structure needs to be oriented towards the target segment / sector / industry / subject.

A throughput-based implementation can provide a holistic approach to performance management through more organized objectives. At the same time, it is important to ensure there is no dilution in quality as well as alignment with the long-term goals.



10 – Expert Speak

Domestic value addition is an important focus area, especially in manufacturing. How do you think this has progressed over the last decade. What are the 2-3 important steps that are required to ensure that the quality of such value addition moves higher up the value chain and does not majorly remain restricted to basic parts and components?

Value addition is at the heart of electronics market in India. It is THE problem when it comes to the Indian industry. The ecosystem is much better when compared to yester years but there is a lot of work yet to be done – especially in the hardware segment when it comes to electronics. What has been achieved till date in mobile phones is also limited. The key challenge for India is that the supply chains are elsewhere – core parts for sub assembly etc are not being produced in India and there are specialized global companies who are making each of them. However, this needs to change.

Take the case of automobile industry. As in autos, once Maruti came in, the network evolved and hubs were created. It was clear that to want a larger market, there is requirement to invest more. Innovations then started organically or through inorganic avenues and this further catapulted the automobile industry in the country. However, it is also important to note that automobiles a couple of decades back and electronics today are vastly different and the ecosystem has drastically changed. And so has the rate of transition in technologies.

One solution is being collaborative with companies and countries leading the technology vertical. Irrespective of geopolitical considerations, it is important to join hands with the best of the best in the above categories. It is important to note that in a segment like electronics, the exponential growth will make it impossible if organic avenues are explored from scratch. We will remain playing catch up instead of being ahead of the curve and this is something that India cannot afford. Hence, while capabilities and capacities are being developed within the country, in order to be in sync with changing dynamics it is important to have partnerships and joint efforts with the right companies and the right partners within the boundaries of the country.

It is also worthwhile to note that it is not important to make everything of everything. Trade is crucial for both - the economics and the geopolitics of any industry and country. Hence, while strategic or critical parts can be and should ideally be made within the country, the other non-critical



10 – Expert Speak

items can as well be continued to be imported. This will ensure that there is efficient utilization of resources as well as expertise in key areas.

A “product / solution” focus should be more important compared to a “platform” focus. While one may not be making the entire platform, it is important to have a niche solution that has a delta / differentiator / USP compared to its peers. As long as it is in the best interests of the country, decisions towards localization and indigenization should also make business sense at the end of the day.

Restricting imports in Information Technology industry is one thing, having similar quality items from domestic sources is another. What do you think is required to balance this demand-supply gap while ensuring that the consumer is not impacted for quality or for price?

This has been an industry centered decision. Again going back to the point – it is not required to one makes everything of everything. It is a globalized world and there are alliances to keep the supply chain intact. Measures should hence be taken to ensure that the demand supply chain is intact – rather than depriving the consumer from the best available product / solution.

That being said, such pauses should not be a sudden exercise – recalibration of supply chains require time and money (logistics and costs apart). Hence while this decision is designed to push people who are not committed to do manufacturing in India, it is a question of how the hard decisions can be implemented.

The intention of the Government is clear when it comes to decisions like this. One needs to either invest in India and be a part of the value chain, or look at other markets. Hence this specific decision with respect to imports etc should also ideally be calibrated to ensure that while localization and domestic companies are being pushed, the Indian consumer is not deprived of the opportunity to have the best in electronics.

Overnight transformation is not possible. In a globalized world, while you cannot be the master of all trades, you need to be of some. Hence this particular decision I think is designed to push companies to invest in manufacturing in India and build efficient supply chains within the country as well. This is a solid policy push towards Atmanirbharta but total implementation is difficult in the short to medium term. The Indian demand will only increase and restricting imports of things not available in India will only result in challenges for the industry and the economy. Hence a thought out policy push in consonance with the demand-supply cycle as well as existing and planned capabilities and capacities will result in a more efficient practice.

Logistics is also a big area with lots of scope in India – be it for the military forces or for the commercial businesses. There is a lot of activity happening with initiatives like Gati Shakti but what are the most important areas within this segment that you believe require a more focussed attention?

India needs an agile logistics and supply chain network. There is a lot of work being done in this segment. Stakeholders are aware of the fact that to ensure that the economy achieves its growth ambitions, logistics and supply chain will be key. Consider electronics, there are many hubs that have been created and manufacturing in various shapes and form is being conducted in the country. Electronic hubs like in Chennai, Sriperumbudur, Bengaluru, NCR (Noida and Manesar) have evolved when it comes to electronics manufacturing. What is required is more efficient transportation and that too not singular but multi modal logistics. Process efficiency can only be achieved through such integration.

The key areas that require focussed attention in the logistics segment include –

- Customs efficiency – leveraging AI and other technologies to ensure that the human element is completely removed from customs. Definitions and systems should be put in place to ensure streamlining and simplification of the process so that the industry does not get bogged down by administrative requirements of meeting simpler compliances which can be conducted through technology
- Last mile connectivity is an important requirement. It needs to be organized and streamlined which therefore requires deployment of equipment to handle equipment.
- Freight corridors – this requires more focus towards safe parking bases and zero waiting time for loading and transportation.

For instance, the Electronic Repair Services Outsourcing initiative was aimed at targeting to make India the repair capital of the world where in the turnaround time in many cities in India was reduced to mid-single-digit days, but it was still not enough compared to global standards. The biggest realization was that definitions / product codes / HSN codes and their syncing with global standards is an important exercise which needs to be done at frequent and regular intervals – basically remaining up to date with the evolution in the industry.

To summarize, logistics needs to be integrated end to end and leverage technology to the maximum extent possible, while of course, maintaining the safety and sanctity of the product, the process and the stakeholder.

About Primus Partners

Primus Partners has been set up to partner with clients in ‘navigating’ India, by experts with decades of experience in doing so for large global firms. Set up on the principle of ‘Idea Realization’, it brings to bear ‘experience in action’. ‘Idea Realization’— a unique approach to examine futuristic ideas required for the growth of an organization or a sector or geography, from the perspective of assured on ground implementability.

Our core strength comes from our founding partners, who are goal-oriented, with extensive hands-on experience and subject-matter expertise, which is well recognized in the industry. Our core founders form a diverse cohort of leaders from both genders with experience across industries (Public Sector, Healthcare, Transport, Education, etc.), and with varied specialization (engineers, lawyers, tax professionals, management, etc.).



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for providing solutions to help clients achieve their goals

RESPECT

For all and alternate viewpoints

INTEGRITY

of thoughts and actions

MASTERY

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Representing the Primus collective, where each individual matters

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