

ORGANIZATIONAL BEHAVIOR

Chronoworking: Transforming work with circadian rhythms

Chronoworking is an innovative work strategy that involves synchronizing work schedules with the internal body clocks of employees, known as circadian rhythms.



By Dr Mamta Mohapatra

In an age where the boundaries between work and personal life are increasingly blurred, enter Chronoworking— a dynamic approach to work that aligns with individual circadian rhythms to maximize efficiency and enhance job satisfaction. Chronoworking is an innovative work strategy that involves synchronizing work schedules with the internal body clocks of employees, known as circadian rhythms. These rhythms are 24-hour cycles that are part of the body's internal clock, running in the background to carry out essential functions and processes. The most well-known circadian rhythm is the sleep-wake cycle, which affects brain wave activity, hormone production, cell regeneration, and other biological activities. With the rise of remote work and digital communication technologies, this concept not only challenges the conventional work schedule but also opens up a myriad of possibilities for increasing productivity and improving employee well-being.

The Science of Circadian Rhythms

Circadian rhythms are influenced by environmental cues, most notably light, which helps to regulate sleep patterns, hormone levels, body temperature, and other vital functions. Disruptions to these rhythms, such as those caused by shift work, irregular sleeping patterns, or prolonged exposure to artificial light, can lead to significant health and productivity issues.

The study of biological timekeeping—has shown that aligning work tasks with an individual's circadian rhythms can enhance cognitive function, mood, and overall performance. For instance, most people experience a cognitive peak between late morning and noon, a dip in the early afternoon, and a recovery period late in the day. Recognizing these patterns allows for the tailoring of work schedules that fit natural energy highs and lows.

Benefits of Chronoworking

Individuals are likely to perform better, make fewer errors, and produce higher quality work when they are working during their peak circadian phases. Aligning work schedules with circadian rhythms can improve sleep quality, boost mental health, and reduce the risk of chronic diseases such as obesity, diabetes, heart disease, and depression. It minimizes the risk of burnout and chronic fatigue associated with conventional work hours. Employees who have control over their work hours to match their biological clocks often report higher job satisfaction, reduced stress, and a better overall sense of well-being leading to fewer sick days and lower turnover rates as employees are healthier and more content in their jobs.

Implementing Chronoworking

Implementing a Chronoworking program requires careful planning and consideration employers need to start by understanding the individual time preferences and peak productivity periods of their employees. This might involve collecting data through surveys or using software that tracks productivity levels at different times. Tools like the Munich Chronotype Questionnaire can help determine whether an employee is a "morning person," "evening person," or somewhere in between.

Having flexible work hours instead of strict work hours, organizations can implement windows of core operation times with flexible starting and ending times that employees can choose based on their circadian preferences. This may mean offering different time slots for work or completely flexible hours as long as work objectives are met. Implementing chronoworking requires robust digital tools that support remote collaboration, communication, and project management across different time zones and schedules.

Lighting, temperature, and workspace design can also be tailored to help stimulate alertness during slow periods and calm down during rest phases showcasing an adaptable work environment. Apps and software that help track productivity and energy levels, providing data can be used to further customize work schedules. It is crucial to continually assess the effectiveness of chronoworking policies. This can involve regular feedback sessions with employees and adjustments based on what is or isn't working.

Challenges to Chronoworking

Synchronizing individual schedules with business operations can be complex, especially in large or globally dispersed teams leading to logistical complexity. Sometimes, moving away from the traditional 9-to-5 model can be met with

resistance from both management and staff accustomed to standard work hours. There is also a risk that flexibility could turn into a demand for constant availability, especially for those in client-facing roles or global teams across different time zones.

Chronoworking in Practice

Several progressive companies have begun experimenting with chronoworking. For instance, a Bangalore-based tech firm has adopted flexible scheduling that allows employees to start their day aligned with their circadian preferences, resulting in a 20% increase in productivity and a 30% decrease in employee health complaints.

Furthermore, companies like Google and Slack have been at the forefront of adopting flexible schedules that cater to individual needs.

Conclusion

As Indian workplaces evolve, integrating Chronoworking could significantly enhance productivity and well-being. This approach not only aligns with global best practices but also addresses unique challenges faced by Indian employees, supporting a healthier, more balanced work-life integration. By adopting Chronoworking and principles of chronobiology, Indian companies can lead by example in the global shift towards more humane and scientifically informed work practices that not only boosts productivity but also fosters a workplace that truly cares for its employees' well-being. The future of work may very well depend on our ability to listen to our bodies and align our professional lives accordingly. (FE10062024)

BANKING

RBI and the impossible trinity

The RBI balance sheet shows that monetary policy had to take a back seat to its other aim of keeping the `exchange rate within a pre-determined band



By NR Bhusnurmath

The Reserve Bank of India's (RBI) Annual Report is, in many ways, akin to the government's Economic Survey presented in Parliament before the Union Budget. Both recount major events in the year gone by — the former with its main focus on the remit of the central bank policy, viz. monetary policy; and the latter with its main focus on the remit of the government, namely the fiscal policy domain.

There is very little that is new or has not been said before in either, other than the section on "assessment" and "prospects" in both. However, in the RBI's case, in its Annual Report, there is one more gem: the bank's audited balance sheet and income and expenditure statement for the year.

A careful perusal of the latter sheds light on a number of aspects of the central bank's functioning — aspects that are often lost sight of in the context of the headline-grabbing news about the transfer of the RBI's surplus to the

government. This year, for instance, the news of the record (Rs 2.11 trillion) surplus transfer announced by the bank last month was singularly uninformed by deeper analysis. This is not surprising. In the absence of more details, it was left to commentators to hazard a guess regarding the source of the surplus.

But now, thanks to the financial statements, we are better informed. As anticipated, the higher surplus is on account of higher income and lower expenses. Income is higher by Rs 40,115 crore and expenditure lower by Rs 83,342 crore, showing the "profitability" of the central bank. Since it was set up not in pursuit of profit but to achieve certain objectives, one needs to study the balance sheet of the RBI to understand how it has managed the monetary policy.

It is the balance sheet, rather the size of it, that gives us a true insight into the operation of monetary policy. The reality, as Garreth Rule of the Centre for Central Banking Studies, Bank of England, puts it, is that "changes in the balance sheet through time…reveal how successful the central bank has been in achieving its goals and how sustainable its current policy objectives are".

He adds, "Although most central banks have moved from quantitative targets for monetary policy operations to price targets, where the domestic interest rate and/or the exchange rate are the operational target for monetary policy, the central bank's balance sheet remains the best place to understand policy implementation."

With that in mind, let's turn to the RBI's balance sheet. Remember, 2023-24 was the year in which the RBI was focussed on "withdrawal of accommodation". In balance sheet terms, this should have translated into a reduction in the size of its balance sheet.

Over the past two years, the Fed, for instance, has shed roughly \$1.5 trillion in treasury and mortgage bonds that it accumulated during the Covid years when it

was trying to stimulate the economy. The Fed's balance sheet has shrunk to around \$7.5 trillion from about \$9 trillion during 2022. In contrast, the RBI's balance sheet increased 11% in 2023-24 from Rs 63.45 trillion to Rs 70.48 trillion.

What explains this apparent contradiction? For answers, look at the way the two main heads — investments in domestic bonds and investments in foreign currency assets — have moved over the year. The simplest way for the RBI to withdraw liquidity is by selling government bonds through its open market operations. Bonds thus sold would come from its holdings accounted for under the head "Investments-Domestic BD" on the assets side of the balance sheet, resulting in a decrease in assets and hence a decrease in its balance sheet size.

However, the decrease in its domestic bond holdings by Rs 0.43 trillion has been more than offset by the increase in foreign currency denominated assets by Rs 4.80 trillion. The RBI's investments overseas increase when its foreign currency reserves go up, typically as a fallout of its intervention in the forex market in a bid to prevent the rupee from depreciating beyond what the bank is comfortable with. The not-so-desirable consequence of this is that it is also at odds with the bank's stated objective of withdrawal of accommodation. It is precisely the opposite: infusion of liquidity. Thus, the size of the RBI's balance sheet has grown as a direct result of it pursuing two conflicting objectives — trying to withdraw liquidity and at the same time attempting to shore up the rupee.

Economists call this the impossible trinity. Also known as the impossible trilemma, this says it is impossible for any country (or central bank) to have a fixed exchange rate, allow free movement of capital, and pursue an independent monetary policy at the same time. One of the three has to give. In the Indian context, it is clear from the RBI's balance sheet that monetary policy had to take

a back seat to the bank's other objective of keeping the exchange rate of the rupee within an internally pre-determined band. True, we no longer have a fixed exchange rate, and the RBI goes to great lengths to say it has no view of the level of the exchange rate and only intervenes to curb volatility. But its actions show the challenges it faces. (FE12062024)

DIGITAL MARKETING

Create digital market first

Any policy miscalculation in the regulatory space can unsettle our digital ambitions.



By Augustine Peter

There are broad similarities between the regulatory framework of the Monopolistic and Restrictive Trade Practices (MRTP) regime and the proposed Digital Competition Law. The MRTP Act and other economic regulations of that period invariably were a drag on economic and technological development.

And it took many years of protracted rolling back of that over-regulated regime. The Competition Act, 2002, was introduced as part of the liberalisation process and to replace the MRTP Act, 1969, which, even after a number of amendments, remained at odds with the emerging liberalised regime in India.

Digital era and competition law

Digitalisation has overwhelmed the global economic landscape in recent years. Serious doubts have been raised about the adequacy of traditional competition law provisions to address the emerging digital challenges. Following in the footsteps of jurisdictions like Germany, the Competition Law Review Committee (CLRC) recommended "transaction value" thresholds for merger filing to the Competition Commission of India (CCI) in 2019, besides other changes in the law. And the 2023 amendment to the law incorporated these.

The Parliamentary Standing Committee on Finance, in its report in 2022, recommended a Digital Competition Law (DCL) for India, though the CLRC in 2019 had not found any need for a separate law. As a follow-up to the parliamentary committee's recommendations, the government set up a Committee on Digital Competition Law (CDCL) to study in depth the issue of digital competition policy and also to prepare a draft Bill.

The CDCL recommended the design of a Digital Competition Law on the following lines: (i) an Act with ex-ante measures; (ii) it should apply to a preidentified list (to be updated from time to time) of core digital services that are susceptible to concentration; (iii) systemically significant digital enterprises (SSDEs), which have significant presence in the provision of a core digital service in India with the ability to influence the Indian digital market alone, should be regulated. Significance is defined in terms of presence in the Indian digital market evaluated through a "significant financial strength test" and "significant spread test"; (iv) a concept of associate digital enterprises (ADEs) is envisaged and covered; (v) explicit exemptions in the statute, as also provisions similar to Section 54 of the Competition Act, 2002, enabling the government to give exemptions from time to time; (vi) the CCI will enforce the new law and make regulations; (vii) penalty for non-compliance would be on the lines of the CCI penalty guidelines, with a 10% cap of the turnover (with provision for global turnover as well, as appropriate).

Are we on the right track?

At one glance, the similarities between the MRTP Act and the proposed Digital Competition Act are obvious. Both are addressing concentration of economic power, which is non-rebuttably presumed to be bad. Both per se are using prohibition of the exercise of concentration/market power. Both are resorting to ex-ante regulation.

Both give substantial flexibility and freedom to the regulator and the department/ministry concerned to widen the scope of the provisions.

The Indian competition law was enacted, "keeping in view the economic development of the country" (preamble): the promotion of "economic development of the country" is paramount. The MRTP Act, in hindsight, stunted economic development of the country. When it comes to the proposed Digital Competition Act, designed broadly on the same lines, the damage could be far worse because the digital space is far more closely linked to technology and innovation.

Rigid regulation not only stunts innovation and development, but also blocks access and reduces affordability. While the impact of regulation on innovation in

the digital space may be seen to be benign, vis-à-vis ex-ante regulation, evidence is to the contrary. Ex-ante regulations tend to feed on themselves and get entrenched.

The primary rationale for ex-ante regulation in the CDCL report is the timeconsuming process of ex-post regulation as it exists currently for processing digital competition cases. This appears to be misplaced. The DLF, cement cartel, tyre cartel, and the first spare parts cases are all still awaiting finality after or nearly a decade of initiation.

The current ex-post system, with some tweaks, can broadly achieve the objective of the Digital Competition Act with much less damage to innovation and economic development. The extant provisions in Section 4 of the draft Bill per se provides for prohibition of specified conduct by dominant enterprises. A new Section 4A could be carved out to specifically apply to digital intermediaries. The types of conduct as identified by the committee for per se prohibition on an exante basis could be included in the list of prohibited conduct as appropriate.

The firms identified as SSDEs and ADEs could be treated as per se dominant and inquiry as regards their dominance could be dispensed with, saving substantial time. At any rate, according to the current dispensation only one enterprise could be dominant in one relevant market. Once such specified conduct is identified, it could be non-rebuttably presumed to be anti-competitive and treated as prohibited.

An accelerated system of disposal of such Section 4A cases could also be envisaged. Digital cases could be processed on a fast-track basis in the CCI. A specialised and dedicated bench could be established in the National Company Law Appellate Tribunal for competition issues. The Supreme Court too needs to have a specialised bench for regulatory issues. As indicated above, the objective of competition law is economic development through fair competition.

Radical regulatory misadventures in the digital space by a developing country like India would only slow down the digital revolution that is already on, and adversely affect innovation, affordability, and inclusion. Even though India is making rapid strides in the digital space, the country has a long way to go.

Any policy miscalculation in the regulatory space can unsettle our digital ambitions. Technology and knowledge flow into the digital space should be encouraged to continue unabated. Market creation should precede market protection. A guarded step-by-step adoption of regulatory stringency is called for. (FE13062024)

Shaping the digital competition law

India shapes its digital competition regime, it can glean insights from the UK's journey



By Shruti Hiremath and Bhoomika Agarwal

With a panel backing an ex-ante framework, India can glean insights from the UK's journey with the DMCC Bill while contextualizing it to our market

Fair competition is essential to drive innovation in India's digital sector. One approach to ensuring a competitive digital sector that policymakers globally are considering is ex-ante regulations. The UK government is debating the draft Digital Markets, Competition and Consumers (DMCC) Bill, which the Digital Markets Unit (DMU) of the Competition and Markets Authority (CMA) will enforce.

Similarly, the Committee on Digital Competition Law (CDCL) in India recently released its report recommending an ex-ante framework and a draft Digital Competition Bill (DCB). Reportedly, a Digital Markets & Data Unit (DMDU) has also been established within the Competition Commission of India (CCI) to facilitate engagement in the digital sector. As India shapes its digital competition regime, it can glean insights from the UK's journey with the DMCC Bill while contextualising these lessons to India's unique market dynamics and policy landscape.

Balancing flexibility and accountability

Under the DMCC Bill, strategic market status (SMS) companies will have to comply with bespoke conduct requirements based on the legislative objectives of ensuring fair dealing, open choices, trust, and transparency. This approach allows for a tailored regulatory regime that accounts for the company's activities and business model. However, it gives the DMU broad discretion, considering that the principles and objectives are not narrowly defined and the DMU's decisions can generally be appealed only on the basis of irrationality, illegality, and procedural impropriety and not on merits (barring in relation to fines). Thus, the DMCC framework highlights the need to balance flexibility against regulator accountability.

The CDCL report recommends a framework on similar lines with separate conduct requirements for each core digital service (CDS), to be determined through regulations while also empowering the CCI to subject different systemically significant digital enterprises (SSDEs) offering the same type of CDS to distinct conduct requirements. Implementing a DMCC-like model in India would require substantial resources and expertise, potentially exceeding the CCI's current capacity. Further, it may lead to divergent regulatory mechanisms for different firms offering the same CDS, which could create uncertainty for the technology ecosystem. To ensure that this mechanism leads to effective compliance, enhancing the capacity of the CCI must be prioritised.

Scope of ex-ante legislation

Under the DMCC, companies will be designated as having SMS in respect of a digital activity linked to the UK if they have "substantial and entrenched market power", "a position of strategic significance", and if certain turnover requirements are met. The term "digital activity" includes (a) providing services via the Internet, (b) providing digital content, and (c) any other activity conducted for the purposes of (a) or (b). While such a broad and vague definition of "digital activity" could ensure that the regime stays relevant as technology advances, it could lead to markets without competition issues being brought under the purview.

The CDCL seeks to address this issue by establishing an initial list of CDSs to which it will apply, akin to the approach of the DMA, with the authority granted to the central government to adjust the list in consultation with the CCI. The report emphasises the importance of applying the draft DCB to an inclusive and pre-identified list of CDSs "vulnerable to concentration and anti-competitive practices". While the relationship between certain CDSs and structural competition law issues is clear through the CCI's enforcement history, the basis for including certain services like video-sharing platform in the CDS list is unclear. It would also be prudent to establish guardrails to ensure that any additional service included in the list of CDS warrants regulatory intervention based on an evidence-based assessment.

Capacity-building

The DMU's responsibilities include advising the UK government, engaging stakeholders, gathering evidence on digital markets, assisting the CMA in ongoing digital sector investigations, and enforcing the DMCC. The UK government has been actively working towards strengthening the DMU by allocating substantial financial and personnel resources. In 2021, the CMA allocated £4.80 million to establish the DMU, followed by £6.26 million in 2022 to develop the DMU further. The CMA also increased its personnel from 786 individuals in 2021-22 to 813 in 2022-23, partly owing to the growth of the DMU.

Enacting the DCB will undoubtedly increase the CCI's workload, especially if India opts for a principles-based, service, and potentially firm-specific approach akin to the DMCC Bill. The CCI's strength was 120 in 2021-22. To ensure that the DCB's impact is not undermined due to inadequate enforcement, the CCI will need to invest in additional human and financial resources, especially with regard to training DMDU personnel on complex technologies and dynamics of the digital sector.

As India navigates the complexities of framing its digital competition regime, it would be prudent to leverage insights from the DMCC while also being cognisant that relying on its framework could result in shortcomings in the Indian context. By striking a delicate balance between flexibility and accountability, India can establish a robust regulatory framework, driving fair competition and innovation in its thriving digital sector. (FE01062024)

ARTIFICIAL INTELLIGENCE

An ally or a double-edged sword?

AI should be seen as a transformative ally in taxation; but given that it is nascent and evolving, its responsible use with humans in the loop is necessary



By Sameer Gupta

Do ChatGPT passing bar exams with flying colours took many by surprise. Artificial intelligence's (AI) ability to come up with suggested diagnosis in the field of medical sciences has also opened several new paradigms to transform healthcare.

Another knowledge-led profession, taxation, cannot be immune to the impact of the newest AI avatar, generative AI (GenAI). We are seeing several use cases emerging at a fast pace, helping legal and tax professionals in their daily lives; they not only help improve productivity but also improve quality of work. However, with the impact of AI also comes the need for careful consideration. Will AI challenge the ways of working of tax professionals, or it will challenge the core competencies of an average tax professional?

AI as an innovative partner

Across the spectrum of a typical tax function, there are multiple areas where GenAI is showing promising impact; these areas cut across compliance, research, and litigation for activities such as data handling, smart analysis, document reviews, and summarisation.

Tax compliance typically involves collecting data from various sources, processing it, and then filling a form template like a tax return or similar document. Conventional tools automate this process to a great extent, but many qualitative tasks are still performed manually. AI can reduce these manual tasks by providing insights and analysis from the data and results. For example, reading and analysing general ledgers or purchase registers and identifying specific events/triggers having an impact on computation of income, blocked input tax credit, or reverse charge transactions under the goods and services tax law.

The function of tax research and litigation is attracting interest in GenAI for its ability to do several tasks better than humans. For example, when a company receives multiple tax notices, AI can help the tax team by quickly reading and validating these notices, and even drafting responses to review and finalise in near-real time. Similarly, GenAI solutions can read and analyse thousands of annual reports and other information and convert it into an insightful output in a matter of minutes.

AI is also transforming courtrooms with the eCourts project, where live video streaming is just the start. Soon, digital records and virtual participation will be

common. Imagine AI recording and storing court transcripts for future analysis and providing analytics about the arguments taken and the observations of a bench. Tools like this, which can transcribe meetings, exist today.

Recently, the Chief Justice of India, DY Chandrachud, also commented: "This proves that AI has the potential to enhance the efficiency of court proceedings by automating routine tasks such as document review, case management, and scheduling. By leveraging AI-powered tools, courts can streamline administrative processes, reduce paperwork, and expedite the resolution of legal disputes. This not only saves time and resources but also improves access to justice by reducing delays and backlogs in the court system."

Furthermore, AI chatbots can help users 24/7, predictive analytical models can tap into historical data to forecast tax trends, and automation of tax calculations can simulate different scenarios and help to optimise tax strategies, demonstrating AI's crucial role in modernising tax practices and guiding strategic decision-making.

AI as a complex ally

GenAI is useful, but it also comes with privacy concerns. We need to think carefully about how we use it. So, what are the challenges? GenAI uses large language models and learns from vast data, but its accuracy isn't guaranteed. In the tax landscape, the margin of error is minimal, and output should be highly accurate.

GenAI can also make up its own answers, which may sound correct but are wrong. "Hallucination" effects can happen for different reasons, like if there's too much data or if the AI wasn't trained well. Hence organisations may explore developing their own pre-trained model for specific tasks on their proprietary data or partnering suitably. Yet the necessity of maintaining a human oversight, often referred to as the "human-in-the-loop" approach, will remain critical till this technology is nascent and evolving.

Another complex question arising due to advent of GenAI is learning and skilling of next-generation tax professionals; academia as well as young professionals need to find new frameworks of learning, and not fall into the trap of "ChatGPT" shortcut.

While at one level, the tax function is progressively pressured with multi-level policy changes, increased controversy, tighter budgets, talent issues etc., there is tremendous opportunity to see how to use GenAI to suitably tackle these challenges. As a catalyst for change, AI is poised to propel the tax profession in a new era.

However, the future of AI in taxation involves balancing technological advancements with risk mitigation. AI should be seen as a transformative ally in taxation, boosting efficiency and aiding strategic decision-making as tax plays a greater role in C-suite discussions. Yet given that GenAI as a technology is nascent and evolving, its responsible use with humans in the loop is necessary. The revolution is here, and it is time to embrace AI's transformative potential. (FE05062024)

Generative vs predictive AI: Both are powerful tools, but manual intervention isn't going away anytime soon

Generative AI models are designed to create new content.

By Siddharth Pai



While generative AI is relatively new, predictive AI has been around for some time, gathering steam and potency with much less fanfare than its newer and flashier younger sibling. For today's installment, I will discuss a comparison between predictive AI, which has proliferated across a series of applications that touch our lives (whether we know it or not), and generative AI, which is the type that is currently grabbing all the limelight. Both are transformative in their capabilities, but in different contexts.

Generative AI models are designed to create new content. Based on the patterns and data they have been trained on, they can produce text like parts of this column, images, music, and more. Prominent examples include GPT-4 by OpenAI, which generates human-like text, and DALL-E, which creates images from textual descriptions. Just as a lark, I queried it to see if it can help with this column and what it thinks of its genre and the older sibling. To do so, I fashioned specific queries and received feedback on these models' need for constant human intervention and training to reduce error rates. It acted like a souped-up search engine while responding.

That said, generative AI models are susceptible to several types of errors. First, as I discussed in my last column, they "hallucinate", meaning they can generate

plausible but factually incorrect or nonsensical outputs. For example, a text generation model might produce grammatically correct but factually inaccurate statements. Also inherent in these models is bias. Since these models learn from large data sets — essentially the entire internet — that contain biases, the biases can be reproduced or even amplified. Further, the outputs may lack coherence or relevance while generating creative content, particularly in longer texts or complex images.

Predictive AI models, on the other hand, are designed to forecast outcomes based on historical data. These models are extensively used in finance, medicine, and marketing for stock price prediction, patient diagnosis, and customer behaviour analysis. For some years now, we have been subjected to this piece of AI through targeted marketing and advertising on our smartphones, or we have benefitted from better medical diagnoses or aids to wealth creation by investing in the stock markets.

Like generative AI, predictive AI models also face their own set of challenges. These models might perform exceptionally well on training data but can fail to mould to new, hitherto unseen data, leading to inaccurate predictions. Moreover, the accuracy of predictive models heavily depends on the quality and completeness of the historical data fed to them. Poor data can lead to poor predictions, which can be dangerous when applied in fields like medicine. Further, predictive AI models can mistake correlation for causation, leading to flawed predictions and decisions.

To be fair to this sort of AI, this obfuscation of correlation (when two numbers move together in a defined pattern) with causation (where one number is in fact causing the other number to move in tandem) is a mistake that human statisticians and data analysts have long made. I would also submit that Indian astrologers (the genuine ones) who use sidereal mathematics to predict how mathematically measurable movements in planetary positions affect our future can be prone to this error if they are not experts.

Generative and predictive AI models require extensive manual training and continuous improvement to minimise mistakes. The nature of this training, however, varies significantly. For generative models, the training process involves using diverse and well-curated data sets to train them.

This can help reduce biases and improve the quality of the generated content, and continuously fine-tuning models with specific data sets can help them generate more accurate and relevant outputs. This often involves human feedback loops where outputs are evaluated and corrected. Techniques like reinforcement learning from human feedback can be employed, where human reviewers provide feedback on generated outputs, and the model learns to produce better results over time.

Effective predictive model training requires ensuring that the historical data is clean, relevant, and comprehensive. This might involve dealing with missing values and outliers and ensuring the data represents a real-world scenario.

Additionally, identifying and creating the right features that the model will use to make predictions is crucial. This often requires domain expertise to ensure that the model focuses on the most relevant aspects of the data. Continuously validating the model on new data and adjusting it based on performance helps maintain accuracy and generalizability.

Google DeepMind has pioneered techniques such as using adversarial training in generative models, where two neural networks (a generator and a discriminator) are trained simultaneously, improving the realism and quality of the generated outputs. They have also explored self-supervised learning, where models learn to predict parts of the data they haven't seen before, enhancing their creativity and accuracy.

Separately, Google has been working on automating this training; CEO Sundar Pichai wrote, "Designing neural nets is extremely time-intensive and requires an expertise that limits its use to a smaller community of scientists and engineers. That's why we've created an approach.... showing that neural nets can design neural nets." According to Amazon, neural nets create an adaptive system that computers use to learn from their mistakes and improve continuously. Thus, artificial neural networks attempt to solve complicated problems, like summarising documents or recognising faces, with greater accuracy.

Both generative and predictive AI are powerful tools. But their rise will require curated data sets, human feedback, data scrubbing to improve data quality, and meticulous data preprocessing and validation. Manual intervention and supervision aren't going away anytime soon. (FE04062024)

Transforming the fashion industry with AI

Having a chatbot that can address grievances at high speed can drastically cut down response times.

By Vedant Modi



If there is one phenomenon that dominates our time, it is the rise and rise of artificial intelligence (AI). Leaders and experts, across all walks of life, are sitting up to take notice. Its relevance to the fashion industry is no exception.

From being worth around USD 270 million in market value in 2018, global AI in the fashion space is expected to amount to a staggering USD 4.4 billion by 2027.

For fashion marketers, this projection is important because in now having to operate in an ecosystem defined by AI, they can no longer view their role as being limited to just marketing.

Instead, they need to have oversight into all the scenarios where AI can have a transformative role to play in enabling them to understand customers better.

For example, with AI, both Above The Line and Below The Line marketing can get more sharply defined. Whether it is in terms of using AI to target a certain demographic during the broadcast of televised matches—think sports drinks advertisements—or gift vouchers for women customers on Women's Day—it can transform how customers are reached because they are now intimately known.

As a result, is it now incumbent upon marketers to not only create a strategy informed by AI but also one that encompasses all potential customer touchpoints, to ensure success.

Data as single source of truth

To see what such a strategy would look like in today's brave new world, let us begin with the first prerequisite—the need to understand a brand's customers. When deploying AI to reach this outcome, what becomes important is the requirement for data. In the fashion industry, this involves collecting relevant data from people to arrive at a 'single source of truth,'—namely the Customer Data Platform (CDP).

Once this is obtained, marketers can create a clear segmentation and a deeper understanding of individual consumers based on what they buy and where and when they make these purchases.

Several global fashion brands including Zara and Shein collect data on their customers' preferences by analysing social media platforms. This coupled with insights around buying patterns and trend projections help these companies better know their customers.

The kind of segmentation these processes lead to enables marketers to deploy MarTech stacks. This is because thorough segmentation helps them better target consumer groups on their preferred social media channels after matching individuals and demographic cohorts to their platforms of choice.

With AI, these outcomes see exponential improvement. Tools and platforms based on this technology are able to zip through volumes of data and derive highly personalised insights to help brands better target customers on the right channel at the right time.

Personalising purchases by tracking clicks

The next step in the customer journey that AI can dramatically rewrite for better outcomes is the point of purchase. By leveraging the insights click tracking provides, marketers can better target individual consumers with the help of AI, which can recommend new products that an individual would most likely interact with.

Amplifying marketing reach

Yet another key aspect of the fashion value chain that AI can revolutionise is how marketing strategy is crafted. Earlier, communication companies had to spend hours in writing copy. Now templates can be fed into AI to help companies do this which can then be matched with the best-suited social media platforms.

This is not to say that AI can replace the communication function. But what it can do is add an intelligent layer to what is typically done to provide creativity and insight in much shorter timespans.

Expediting concerns; personalising targeting

Still, another part of the marketing ecosystem that can gain significantly from AI are the Customer Relationship Management (CRM) and Consumer Relationship Systems (CRS). AI can transform the way that marketers can handle grievances and improve customer retention.

Let us begin by looking at customer grievances. When a brand has great data, it can create an AI chatbot to reply to its consumers easily, no matter what queries come in, regardless of the time. This has immense use value in the fashion and retail space where consumers expect quick and personalised attention to their highly specific concerns. Having a chatbot that can address grievances at high speed can drastically cut down response times.

A closely affiliated area in which AI can have powerful effects is with regard to retention. Remember how your favourite food delivery apps, including Swiggy and Zomato, can send you push notifications at dinner time with exactly the kind of food or snack you love? That is their AI retention model in use. When marketers deploy AI to do this, they help brands deepen connections and pave the way for new consumer cohorts.

Celebrating the human

However, a cautionary note about AI in marketing for the fashion industry is that marketers must not become its slave. Although AI can provide broad insights, it cannot know a consumer the way only another human can. That exceptional quality—insight—is the biggest function a marketer is tasked to fulfil, and it will remain and must remain manual, creative, and human.

Another valid concern regarding the use of AI is the issue of data safety. No matter how exciting the possibilities, no technology is worth it if it poses a risk to consumers.

Keeping it safe

To address this concern effectively, consumer tech leaders invest in putting their data into one ecosystem and then putting a safety layer on top of it. This ensures that while every department of a company has equal access to data, it is safely masked.

Yet, there is no doubt that when done responsibly and well, AI is here to make everyone's life better. We need to be open about its possibilities while being aware of its limitations. (FE08062024)

FINANCE

Will investment optimism fade?

Settings for an imminent or sure revival not convincing enough

By Renu Kohli



A resurgence in business spending is believed to be in the offing by most stakeholders, including the government and the central bank. These expectations hinge upon, inter alia, strong profit growth and debt-light balance sheets of corporates, striking business optimism, brisk growth of capital goods, public announcements and signing of investment initiatives, confirmatory statements from officials, prominent businessmen, and commentators, etc. Collectively, these have formed a narrative saying this time is different, and real.

It may well be that these beliefs, or the general narrative about investment renewal, is well-founded. Or over-optimistic. Time will tell. Meanwhile, an evaluation of the central underpinnings shines a light on its prospective regeneration. What does this indicate?

The key metric is corporate profits. Incomes of corporations are earned from investments — new ones due to innovation and risk-taking or existing ones in production, i.e. sale of goods and services yielding revenues. The volumes sold are driven by consumer demand, of which there are two components, viz. final purchases by domestic consumers and by rest of the world or exports. Corporate profits are thus the fundamental measure for capital investments, which they mainly fund to enhance productive capacity. A close look is merited therefore.

Excluding taxes and as a share of GDP, corporate profits have successively risen from their 2020 trough across non-financial and manufacturing companies. Their trend decline, which began from 2008-2009, started reversing from 1% of GDP in 2020 to ~3-4% region in 2022. This restoration has been helped by three factors. The first shot came from corporate tax rate reductions in September 2019 — to 22% from 30% for existing firms, and to 15% for new manufacturing ones. As result, the effective tax rate for firms with pre-tax profits beyond Rs 500 crore and income exceeding Rs 10 crore (these have ~54% share in total corporate income liability) moderated to a respective 20.2% and 19.1% in FY20-FY21. The preceding four-year average, effective tax rate was 25.5% (FY16-FY19).

Two, profit margins leapt during, and after the pandemic, as inflation combined with exceptional demand, bestowing significant pricing power to firms who could increase profits by passing on input costs. The Centre for Monitoring Indian Economy's website record shows net profit growth of 63% and 71.9% in FY21-FY22 (~27,000 non-financial companies), followed by 0.5% increase in FY23; corresponding post-tax margins were 3.5%, 4.7%, and 4.2%. In FY24, profit growth and margins averaged 44% and 8% respectively in the first three quarters (~3,400 firms). The third factor has been strong export growth from robust foreign demand that included some unusual features related to the pandemic. This boosted manufacturing firms' profitability, which displays a historically close association with exports (e.g. 2010-12, 2017-18).

Future improvement in private investment, thus depends on the progression of these factors. This is unclear and debateable.

For one, we need to observe whether and how the changes in tax structure have altered spending behaviour of firms. The budget analysis (FY24) identifies that 20.5% of the companies shifted to the new concessional tax regime in FY21, following the rate reduction from ~19% in FY20, not a significant change. One must also note the lower effective tax rate may be significant compared to the preceding four-year average (25.5%), but not so against the 22% average effective rate in FY09-FY13. In a sense, the FY20 tax reduction for existing firms may have reversed the FY16-FY19 effective rate, restoring it closer to former levels. Whether this was more a rollback or relief instead of an investment spur, all else equal, is not clear. Prospective demand, here and outside, forming a critical mass may be of greater importance in that context.

Two, with the moderation in producer price growth inflecting north, margins will depend upon the pricing decisions of firms and how they balance productivity and volume growth. Volumes have lagged profit growth in the post-pandemic cycle, especially fast-moving consumer goods firms, whose management has routinely flagged concerns about consumer demand, the impact of inflation, expressing hope for regeneration each quarter. At the aggregate level, real private final consumer spending slowed to 3% in FY24, less than half that in FY23 (7.5%). For January-March 2024, corporate results (~2,100 non-financial companies) indicate net profits grew -2.6%, while margins maintained around the previous three-quarter average (8%). Consumer goods' volumes grew just 0.3% in FY23 (NielsenQ), which also boosts FY24 growth — some analysts have noted that significant price cuts by many firms failed to grow volumes, weakening net sales and profit growth. The anticipated zest in domestic consumer demand is still nebulous. Not the perfect environment for business expansion.

Third, the strong export growth is cooling. World merchandise trade volumes are forecast growing slower in 2024 by the World Trade Organization (2.6%) compared to its October prediction (3.3%), following a 1.2% contraction, and with high uncertainty. Global growth is expected to sustain at 2023 levels this year and next (3.2%), according to the International Monetary Fund which predicts it slowing in the medium-term — again not an ideal setting for private investment to turn around.

Some other points to note are as follows. One, the brisk 12% annual average growth in capital goods' output in FY22-FY24 has lifted the index 14% above its FY20 or pre-pandemic level; this was about the same level as 6-7 years ago. Two, gross fixed assets growth, corrected for inflation, slowed across-the-board for manufacturing, and non-financial companies as a whole, showing no sign of resurgence at least in FY23. For now, we should certainly remain circumspect. (FE04062024)

Pushing pvt capex-led growth

Ensuring it is driven by players besides the leading conglomerates is imperative

By N Chandra Mohan



The top priority of the incoming government must be to facilitate a virtuous cycle of private sector investment-led growth. This is an unfinished agenda of the last five years. Despite a strong public capex push, corporate investments have not crowded in to drive the process of overall economic expansion, which hit 8.2% in FY24. To be sure, leading family-run conglomerates have been making big-ticket investments but a broader private capex upswing has not kicked in. The significant concentration of new investments by only a handful of big players cannot fast-track India's growth beyond the short term. There is a need for more participation from India Inc, whose entrepreneurial spirits have been dampened to undertake capacity expansion.

While conglomerates ramp up their investments, other domestic firms are hesitant to invest despite regular exhortations from the highest levels of the government. A focus on capacity utilisation offers valuable clues in this regard. While these are higher at 75-80% levels for companies in steel, cement, automobiles, and chemicals as demand has improved, the overall capacity utilisation rates are not so assuring. Although they improved from the Covid-related lows of 47.3% during Q1 FY21 to hit a high of 76.3% in Q4 FY23, it subsequently fell to 74.7% in Q3 FY24, according to the Reserve Bank of India (RBI).

Unless demand for manufacturing goods improves, average utilisation rates will not improve to a point where private industry requires additional capacity.

Like elsewhere in the US and Japan, there is no doubt that the dominance of very large companies or conglomerates has been rapidly growing in the economy. The trend of industrial consolidation has proceeded apace, with many sectors being taken over by fewer and bigger entities. This is evident in telecom, airlines, steel, cement, aluminium, synthetic fibres, polymers, paints, cars, trucks, two-wheelers, tractors, tyres, consumer electronics and electricals, toiletries, and even biscuits. The country's 20 biggest firms now generate 80% of profits generated by the economy, which is twice what it was a decade ago, according to Mumbai-based fund manager Marcellus, which highlighted in detail the growing concentration of investments and profits.

Conglomerate capitalism discourages innovation, widens income disparities, and slows growth over the long term. These big players also use their pricing power, which is one of the factors that can drive inflation in the economy. The dark side of this path of development is reflected in the sharp rise in big-ticket corruption after reforms were implemented since 1991, which upsets even the ardent advocates of liberalisation. Conglomerates historically have had a close relationship with the Indian State, notwithstanding the churn in their ranks over the years. This is largely responsible for their investments in line with the government's economic policy priorities. Not surprisingly, they view their ambitious capex plans as contributing to nation-building.

For such reasons, India must not let a handful of tycoons and conglomerates to "define its destiny", argued Uday Kotak, who founded one of the India's largest private sector banks. He accordingly urged the country to aim for broader growth with many "winners" or "encouraging many flowers to bloom" in an interview to the Financial Times. These comments also resonate with development economists, who have drawn parallels between the dominance of conglomerates across vast swathes of the economy and the chaebol-dominated South Korean economy. Such a development strategy reduces the space for small and medium businesses to grow into larger firms and contribute to a more broad-based growth process.

The big question is: How can all of this change for "many flowers to bloom"? In other words, how can a version of capitalism take root in the country that is more competitive than conglomerate-oriented? Free and fair markets are a must, and the policy of the incoming government must address this to widen the pool of competition. The process of creative destruction must be allowed, whereby small and new firms have a chance to disrupt the existing concentration of significant business power of the handful of conglomerates. A trust-buster strategy recommended by a former RBI Deputy Governor, Viral Acharya, for breaking up large conglomerates by regulatory fiat or competition commission diktat, deserves attention. There is clearly a need for greater checks and balances through regulatory agencies having the authority to intervene, if necessary, to check market abuses and anti-competitive behaviour.

In this milieu, triggering a private capex upswing to drive the India growth story also entails addressing the serious difficulties in doing business on the ground, especially in various states. The incoming government must implement deeprooted structural reforms to free up the land and labour markets. Problems of land acquisition have bedevilled many investment projects. Domestic small and medium businesses, for their part, are struggling to cope with labour law requirements and predations of the inspector raj. Rather than aspiring to break into the top 50 countries on the ease of doing business indicators, it is these structural economic reforms that are needed to kick-start more private sector investments. India Inc's animal spirits then are bound to be rekindled to broaden and drive the pace of economic expansion. (FE06062024)

MARKETING

From static to dynamic – How multimedia can elevate your email marketing strategy

In a world saturated with content, static information is losing the battle for attention. Here's why multimedia storytelling is the key to captivating your audience.

By Samarth Saxena



The daily email deluge – we've all been there. Our inboxes overflow with subject lines screaming for attention, promising deals, updates, and the latest news. Yet, a sense of weary familiarity washes over us. We click on a few, scan the text, and move on, another casualty in the daily battle for attention.

This isn't just an email problem. It's a symptom of a larger issue: information overload. The digital age has democratized access to information, bombarding us with reports, articles, and marketing materials – all vying for a sliver of our

attention span. This paradox leaves us with more data than ever before, yet struggling to truly engage with it.

Traditional methods of content delivery often fall short. Static PDFs and textheavy documents struggle to capture attention in our fast-paced world. Information gets lost, key messages fade into the background, and the intended impact fizzles out. This struggle extends beyond email marketing – it permeates every corner of the digital landscape.

Crafting compelling content is a constant challenge. Across industries, the challenge remains the same: how to transform static information into captivating experiences that resonate with audiences and leave a lasting impression. How do you ensure your message cuts through the noise and resonates with audience?

The Power of Engagement through Multimedia Storytelling

The answer lies in transforming information into captivating experiences. Imagine financial reports that unfold like narratives or brochures that come alive with interactivity. This is where creative content delivery comes in. By weaving multimedia elements like videos and interactive features into content, audiences become engaged participants, not passive recipients. This approach fosters deeper understanding and a lasting impression.

The possibilities are vast and impactful across industries. Financial institutions can ditch the dry statements and reports, crafting visually compelling narratives instead. Interactive charts showcase investment performance, while explainer videos bring complex insurance policies to life. Real estate agents can immerse potential buyers in 360-degree tours, and travel companies can create interactive brochures brimming with captivating visuals and destination details. Even non-profit organizations can leverage multimedia presentations to share their stories in a way that fosters deeper connections with potential donors. This shift from

static content to interactive experiences represents a revolutionary impact on communication, fundamentally changing the way audiences consume and engage with information.

A Win-Win for Everyone

This interactive approach isn't just a gimmick; it benefits both audiences and businesses. For audiences, information transforms from a chore into an engaging experience. They can explore content at their own pace, delve deeper into topics of interest, and ultimately retain information more effectively. This translates to significant benefits for businesses as well. Increased engagement leads to higher conversion rates, improved brand perception, and a more loyal customer base. By fostering genuine interaction and igniting curiosity, businesses can build stronger relationships with their audiences.

The Future of Communication beyond Static Content

In an age of information overload, creative content delivery is the key to capturing attention and making your message resonate. It's about moving beyond static communication and forging connections through engaging experiences. This is the future of communication, and it's a future where information delivery becomes a powerful tool for engagement and understanding. As we celebrate World Email Day, let us not only acknowledge the enduring strength of email communication, but also its continuous development. To transcend email's limitations, we can explore innovative approaches that transform static messages into dynamic experiences. This can lead to unprecedented levels of engagement, redefining how businesses connect with audiences in the digital age. (FE16062024)

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