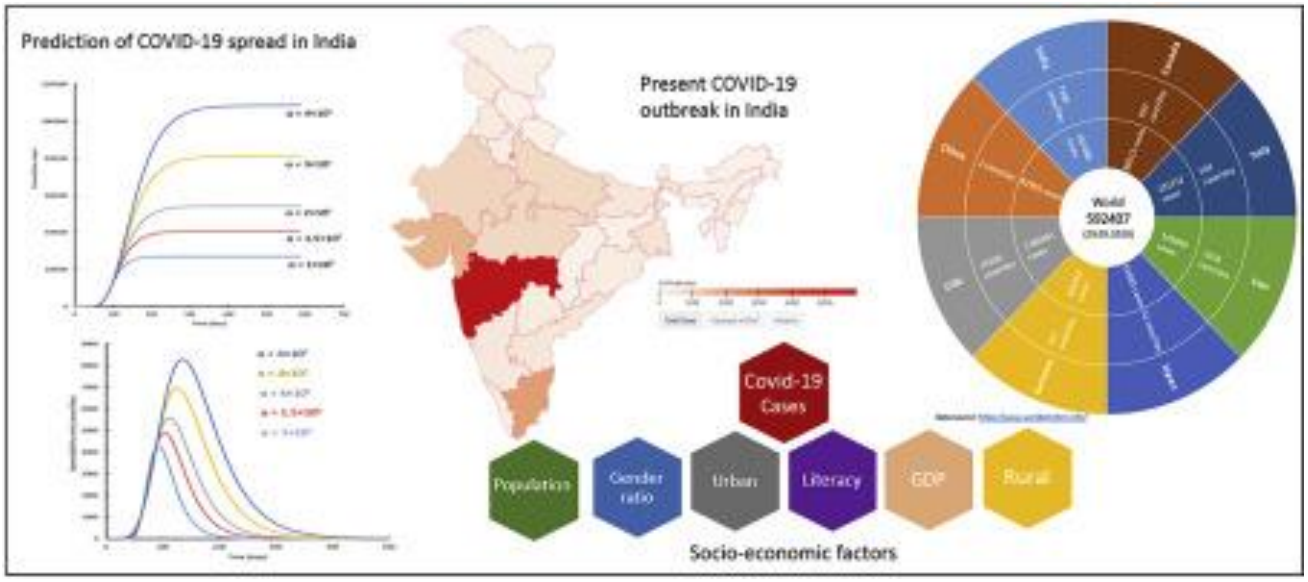
COVID-19 CASE ANALYSIS

INNOVATION:

Harnessing analytics to tackles some of contemporary mainstream management research challenges and covid-19 related issues:

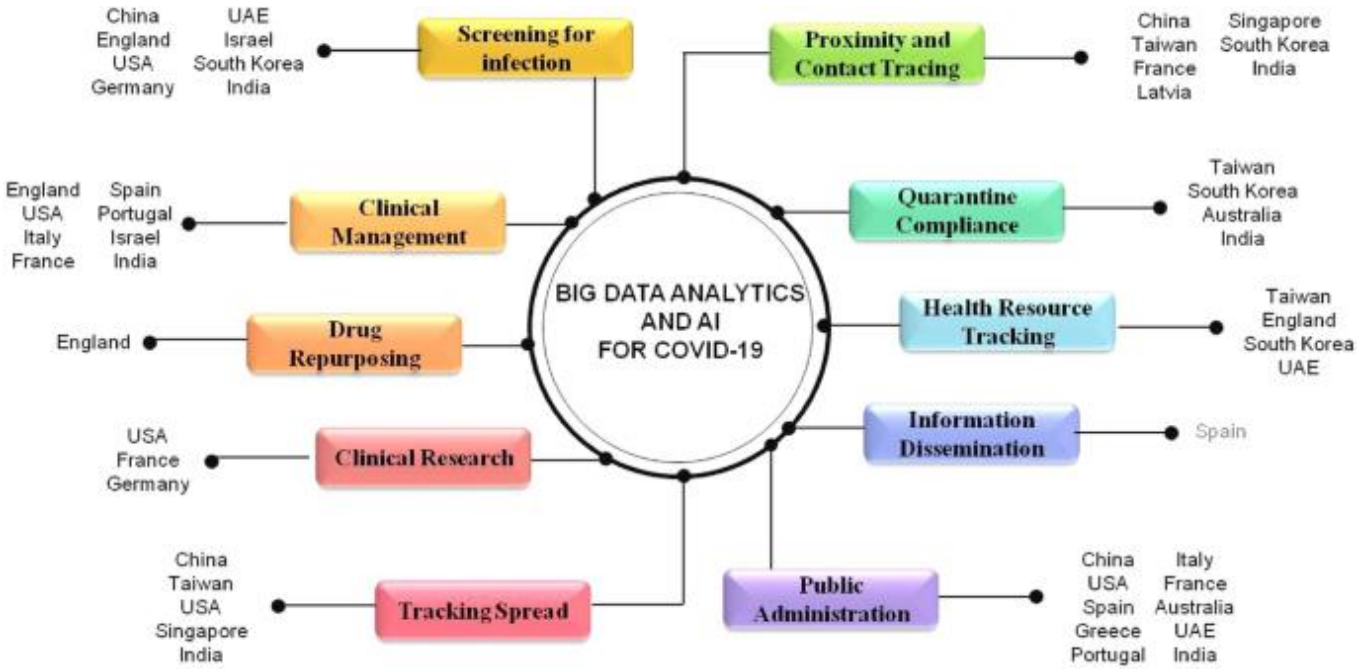
Principally dominated by epidemiological models, national governments and healthcare authorities have relied on modelling expertise extensivelyto make important decisions in combating coronavirus outbreaks and mitigating the economic and social effects on different communities. Given the unparalleled shock triggered by COVID-19, hard to predict as a 'black swan event' (Yarovaya, Matkovskyy and Jalan, 2020), there is a need for better understanding of analytics techniques to help organizational leaders and managers better identify looming challenges and make sense of their environments and make data-driven quality decisions. Such methods can help businesses to cope with extreme uncertainties and unpredictableevents. For example, firms can utilize big data analytic methods to make effective decisions about uncertain events such as selecting a particular market for investment, predicting potential risks and growth in their respective sectors, identifying potential alliance partners and suppliers, or developing new products and services for customers.



In addition, big data analytic methods can enable businesses to deal with uncertainties associated with the black swan event, such as the wellbeing of their employees, making sound financial decisions and effectively and efficiently managing supply chain safety and other extreme external political,legal, economic and social risks (cf.Henke, Puri and Saleh, 2020).

Black swan events such as those caused by COVID-19 can also amplify business failures (Amankwah-Amoah, Khan and Wood, 2020), and firms could utilize big data analytics methods to mitigate external risks and reduce business failures through sound business planning and forecasting. Therefore, from emergency hospital operations management to supply chain resilience development, different analytics approaches can play an important role in the immediate response to the COVID-19 pandemic and the economic recovery after the pandemic. Drawing insights from the review of the different analytics techniques including descriptive, predictive and prescriptive analytics – provides an opportunity to outline how they can be harnessed to study some of the contemporary management topics and COVID-19 issues, including: the future of work (human resources and organizational behaviour-related challenges), new marketing practices with changing consumer behaviour, product/service development and innovation, global value chains, challenges in sustainability, governance and public policy as demonstrated in Table 3 . We set out future diretions for management scholars to explore how to employ data analytics to help businesses respond to – and recover from – the global crisis caused by the COVID-19 pandemic.

Future of work:



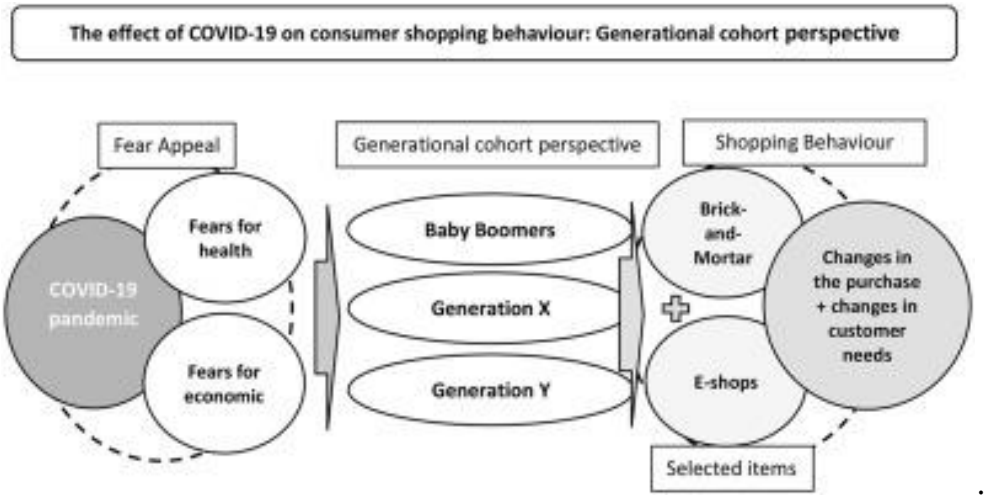
The first area of our focus here relates to what we broadly view as ‘future of work’ (human resources and organizational behaviour-related challenges) issues. The dynamic changes in the global economy – some precipitated by pandemics and other by technological development – have led to the destruction of jobs. There is a need to examine these megatrends and their effects on the labour market. As demonstrated in Table 3, there are a number of promising questions that

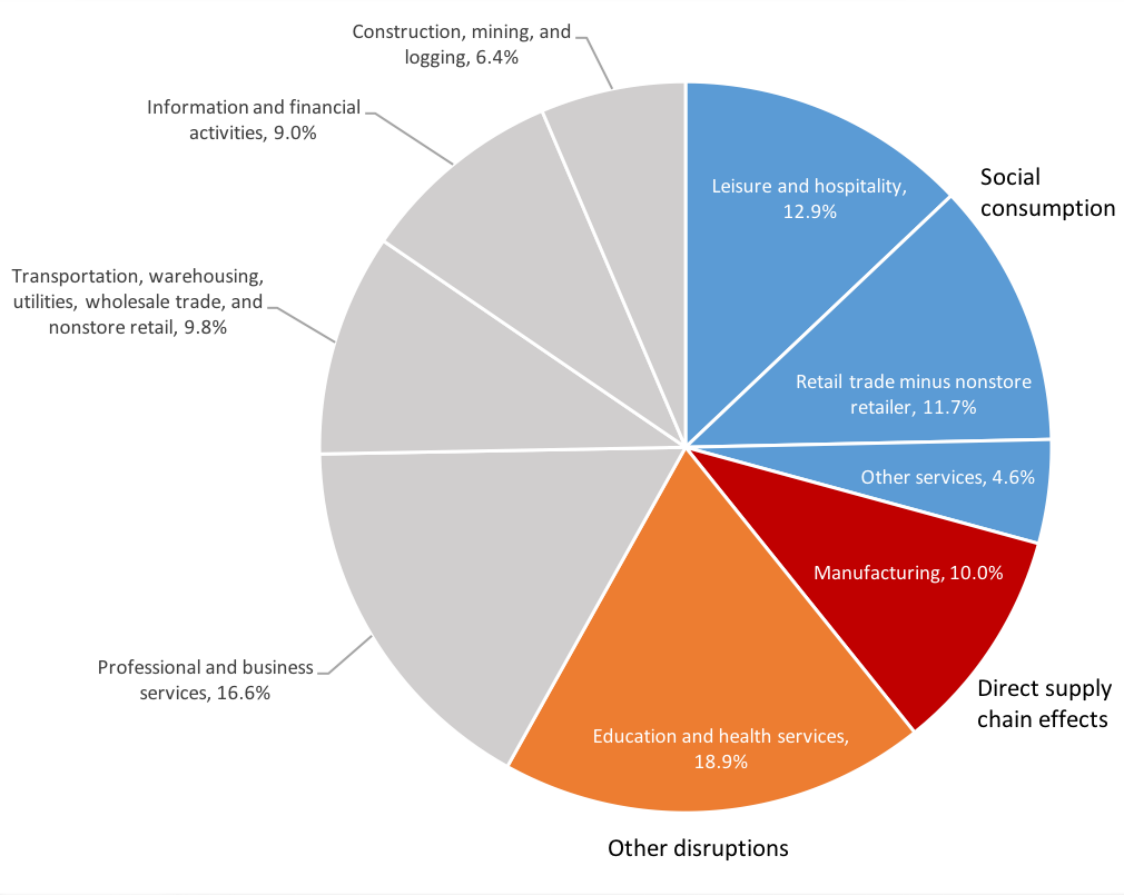
can be pursued utilizing the techniques noted. From a strategic human resources perspective, organizational leaders will be able to predict the performance of individual employees and teams via mining internal digital existence such as emails, chats and employee-generated content, combined with data from human resources information systems and performance management systems (Leonardi and Contractor, 2018). Besides, insights from the review suggested that analytics has the potential to provide a deeper understanding of work arrangements, work design and routines. In the COVID-19 pandemic, homeworking has become a new norm for many office workers.

CHANGES IN CONSUMER BEHAVIOUR AND NEW MARKETING PRACTICES:

Stemming from COVID-19, social distancing and quarantines have forced people to change their consumption behaviour. Such a crisis poses extreme uncertainties and a survival threat to brick-and-mortar businesses, and weakens their competitiveness (Amankwah-Amoah, 2018). Many retailers have experienced a sudden drop in sales for offiine outlets, while demand for online groceries and quarantine essentials has hiked up by an unexpected amount. Due to the reduced traffic to physical stores, retailers who have the technological capability have learnt to improvise by transitioning to online product selling and delivery. These circumstances spark changes in consumer shopping habits, with customers self -serving or switching to services they are not used to patronizing. This change in consumer behaviour may be temporary, but it could be sustained even when the critical stages of crisis passes.

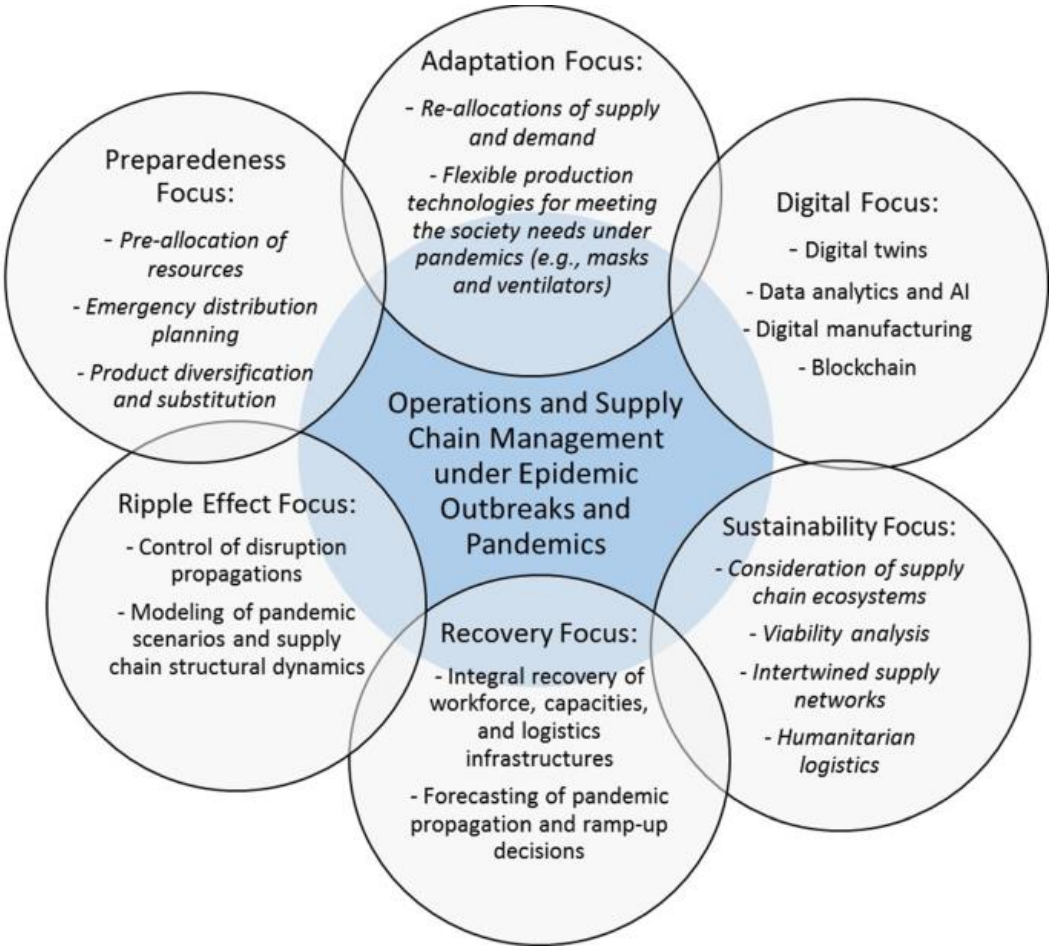
The changes in consumer behaviour will require an adaptation of marketing practices to the current context, which also leads to new opportunities with the help of data analytics. In the middle of the crisis, it is important to collect data on a continuous basis in order to meet the evolving needs of consumers. On the one hand, the real-time data on sales, inventory, operations and market trends should be monitored to identify changes in the market through data mining and descriptive analytics. For example, Google launched a platform called Rising Retail Categories to help brands and manufacturers to track search interest across retail categories and locations.





OPERATION AND E-SUPPLY NETWORK:

COVID-19 has brought significant disruption to global supply chains from the critical movement of people, finished goods, raw materials to factory operations and supply chain partners' operations. For instance, many businesses' operations and staffing are dramatically altered because of social-distancing measures and the halt of major European automotive manufacturers' production networks means the breakdown of the entire supply chains. Meanwhile, innovation and digital transformation will play an important role in economic recovery in the aftermath of the pandemic (Chesbrough, 2020; Hartmann and Lussier, 2020). For example, companies such as Amazon and Ocado that leverage advanced technologies such as robots and AI to manage their operations and supply chains have already proved to be winners during the COVID-19 pandemic (Kahn, 2020). Logistics service providers are able to overcome adverse conditions to provide essential supplies to hospitals and consumers with the support of digital technologies and Internet platforms. New models of workflow can be created with digital information and connectivity, transforming the traditional supply chains into e-supply networks, where organizations are connected with complete supply networks to enable end-to-end visibility, agility, collaboration and optimization (Dolgui, Ivanov and Sokolov, 2020; Ivanov, Dolgui and Sokolov, 2019).



While many companies are preoccupied with dealing with the immediate impact on their people, customers, suppliers and broader supply network partners, other organizations have gone further to restore supply chain operations and prepare for 'the new normal' regarding the manner in which supply and demand are matched. In recent times, real-time data (e.g. transactional data, sensor data, GPS data) are being constantly generated and collected along supply chains, big data analytics approaches are also being used for critical operations.