samvad

June 2019

S.P. MANDALI'S weschool Welingkar Education

PHARMACEUTICAL INDUSTRY

WeChat- Ms Rhutika Doke

Management Consultant at IQVIA

ABOUT US

OUR VISION

"To nurture thought leaders and practitioners through inventive education"

CORE VALUES

Breakthrough Thinking and Breakthrough Execution

Result Oriented, Process Driven Work Ethic

We Link and Care

Passion

"The illiterate of this century will not be those who cannot read and write, but those who cannot learn, unlearn, and relearn." - Alvin Toffler

At WeSchool, we are deeply inspired by the words of this great American writer and futurist. Undoubtedly, being convinced of the need for a radical change in management education, we decided to tread the path that leads to corporate revolution.

Emerging unarticulated needs and realities require a new approach both in terms of thought as well as action. Cross-disciplinary learning, discovering, scrutinizing, prototyping, learning to create and destroy the mind's eye needs to be nurtured and differently so.

We school has chosen the 'design thinking' approach towards management education. All our efforts and manifestations as a result stem from the integration of design thinking into management education. We dream to create an environment conducive to experiential learning.

MESSAGE FROM THE DIRECTOR

Dear Readers,

Prof. Dr. Uday Salunkhe
Group Director

It gives me great pride to introduce SAMVAD's edition every month. Our SAMVAD team's efforts seem to be paying off and our readers seem to be hooked onto our magazine. At WeSchool we try to acquire as much knowledge as we can and we try and share it with everyone.

As we begin a new journey with 2019, I sincerely hope that SAMVAD will reach new heights with the unmatched enthusiasm and talent of the entire team.

Here at WeSchool, we believe in the concept of AAA: Acquire Apply and Assimilate. The knowledge that you have acquired over the last couple of months will be applied somewhere down the line. When you carry out a process repeatedly it becomes ingrained in you and eventually tends to come out effortlessly. This is when you have really assimilated all the knowledge that you have gathered.

At WeSchool, we aspire to be the best and to be unique, and we expect nothing but the extraordinary from all those who join our college. From the point of view of our magazine, we look forward to having more readers and having more contributions from our new readers.

SAMVAD is a platform to share and acquire knowledge and develop ourselves into integrative managers. It is our earnest desire to disseminate our knowledge and experience with not only WeSchool students, but also the society at large.

Prof. Dr. Uday Salunkhe,
Group Director

FROM THE EDITOR'S DESK

Dear Readers,

Welcome to the June Issue of SAMVAD for the year 2019!

SAMVAD is a platform for "***Inspiring Futuristic Ideas***" and we constantly strive to provide articles that are thought provoking and that add value to your management education.

With courses pertaining to all spheres of management at WeSchool, we too aspire to represent every industry by bringing you different themes every month. We have an audacious goal of becoming the most coveted business magazine for B-school students across the country. To help this dream become a reality we invite articles from all spheres of management giving a holistic view and bridge the gap between industry veterans and students through our WeChat section.

The response to SAMVAD has been overwhelming and the support and appreciation that we have received has truly encouraged and motivated us to work towards bringing out a better magazine every month. We bring to you the June Issue of SAMVAD which speaks about "**The Pharmaceutical Industry**" an industry that we all are associated with directly or indirectly. It is an industry that is growing at a CAGR of 15% over the last five years and is recession free. This issue shares highlights the different aspects of the Pharma industry in the areas of Operations, Finance, HR and Marketing.

We hope you read, share and grow with us!

Hope you have a great time reading SAMVAD!

Best Wishes,

Team SAMVAD.

"When we have to do with an art whose end is the saving of human life, any neglect to make ourselves thorough masters of it becomes a crime"

- *Samuel Hahnemann*

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WECHAT

Ms. Rhutika Doke
Management Consultant at IQVIA

Team SAMVAD

1) Could you please take us through your journey in the Pharma Sector?

Ans. My experience so far has been in the healthcare consulting sector. I have had the opportunity to work with all major pharma players, ministries of health & other Govt bodies. Market assessment, social media strategy, organizational restructuring, patient pool calculation, sales forecast, business analytics, primary intelligence, competitive benchmarking, business development, M&A/ investment strategy are a few topics that I have worked on in my tenure till date.

2) What is your take on the e-pharmacies? Does it need any regulation to be implemented?

Ans. E-pharmacies have already started disrupting the store-to-patient supply chain. Tech giant Amazon recently announced acquisition of Pill-Pack, a medicine delivery service catering to patients in the US. This deal should be indication enough of the incremental value e-pharmacies bring into the pharma value chain. On the outset, there appear to be numerous benefits. However, for e-pharmacies to fully penetrate the market, it needs to overcome trust issues (fear of counterfeit medicines), have a robust after-sales service, aim to maximize reach so that accessibility is not an issue, and most important, data privacy (patient health records & prescriptions stored & maintained at the highest safety/ security levels)

3) Does belief in homeopathy and Ayurveda pose a challenge to doctors who prescribe antibiotics?

Ans. I believe the answer to this question is extremely subjective and would vary from patient to patient. I had known patients to be loyal to one line of treatment & when that did not work out well, and they had no issues immediately switching to the other end of the spectrum.

4) With the advancement in medical technology, the number of drugs available in the market today is increasing exponentially. In such a scenario, inventory management in pharma stores is critical to avoid delay in searching for a medicine required by a particular customer. Some innovative techniques to make this possible?

Ans. On the contrary, most diseases have some form of medication available in the market right now. Oncology, neurology, and rare diseases remain unconquered territories. I agree that inventory management is a critical point in the pharma supply chain. However, the

criticality of searching for the medicine & making it available for administration in less than a minute is highest in an emergency care setting, and most such setups are well equipped to avoid any delay. The last technique for medicine delivery I remember is the use of pneumatic chutes throughout the hospital.

5) Should biosimilars be encouraged? Will it have a greater market penetration in India?

Ans. Generics of biologics (biosimilars) are quite distinct from typical generics. Since live organisms are used for production, the biosimilar is not exactly always the same as the biologic. Biosimilars will be much more affordable & for a price-sensitive market such as India, they can have a major impact. Provided the quality & accessibility is comparable to that of the biologic it is mimicking, biosimilars could capture a major chunk of the market.

6) What advice would you like to give students willing to build a career in this industry?

Ans. If you happen to have your education aligned to this sector, there are endless possibilities that one can explore – Pharma, consulting, hospital, Govt policies & public health, insurance, medical devices, and so on. For an experienced candidate, it might be easier to navigate & look for the role aligned to your goals. If you are a fresher, it would be helpful to do an extensive research by talking to seniors/ industry peers & understand where is it that you would eventually want to go.

Also, it is all right to enter a role that you like but, after some time, realized that this is not what you were looking for in the first place. Invest your initial years in learning as much as possible & be up to date with the latest skills/ technologies out there. Do not hesitate to start at a smaller firm, the advantage being there is much more room & freedom to move around & try different roles than in a full-scale MNC where your role will be pre-defined.

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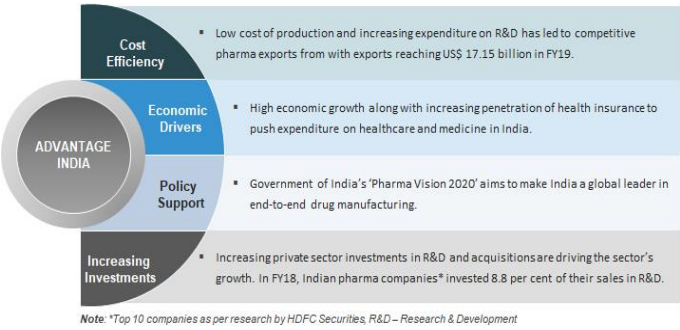
OPERATIONS

Essential need of changing supply chain to optimize delivery process of pharma products

Udit Chandra Khorwal- MBA Operations, SIBM Pune

India has been among the fastest growing pharmaceutical markets in the world and was valued at US$ 33 billion in 2017, with the highest number of US FDA approved sites. The growth is expected to continue in the coming years and India's pharmaceutical sector is expected to nearly double its value to US$55 billion by 2020.

Image 1



Source: https://www.ibef.org/industry/pharmaceutical-india.aspx

Although the growth of pharmaceutical sector looks promising there are various operational challenges that need to be overcome. Due to increasing competition from domestic and multinational players the Indian pharma companies have started to diversify and started developing capabilities to manufacture more differentiated and complex generics. This has several implications for the supply chain, which include higher manufacturing and distribution costs. There also a pressure to keep the prices of the drugs low.

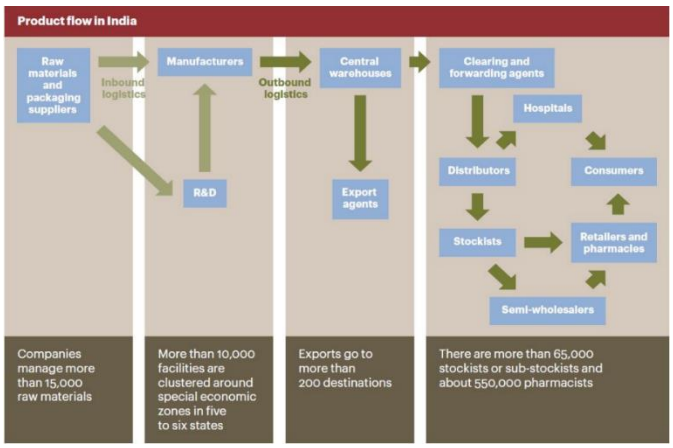
There also lack of proper infrastructure for the transportation of goods like highways, robust railway system. Airways is not properly utilised. As far as the storage is concerned, there is lack of cold storage infrastructure in India.

Pharmaceutical cold chain management is an important aspect of the supply chain in the healthcare industry. The cold chain logistics services help the pharmaceutical and healthcare industries maintain a continual stock of drugs from suppliers and distributors across varied locations. Many new drugs have shorter shelf life and have temperature constraints for storage. The biggest challenge within cold chain is to maintain the 2°C - 8°C range throughout the delivery cycle, which is the most common range for the pharmaceutical industry. Some vaccines such as Polio need to be supplied to many remote locations so there is a need for a robust supply chain.

Image 2

The current supply chain is complex and fragmented, involving a number of players at each stage posing concerns about product quality and safety. The lack of integration also adds to the inefficiency of the supply chain. Lack of quality control measures at the Research & Development stage leads to more failures of trial batches, causing delays in product launches.

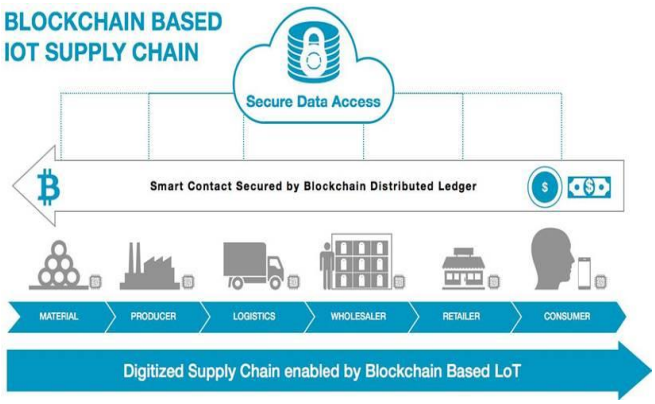
Image 3



Source: A.T Kearney analysis

Another challenge is to cope up with the emerging technologies and incorporating them in the supply chain. Integrating technologies like blockchain and IoT can significantly improve the efficiency of the supply chain and make it more transparent.

Image 4



Source:
https://www.iothub.com.au/news/combining-iot-and-blockchain-for-supply-chain-tracking-492501

Blockchain is a database that digital data records in a way that makes them permanent and cannot be tampered with. It may allow access to many users to read, or to add data, but they can't modify or remove it. The information stays safe, leaving a permanent trail of information or chain of transactions.

Documenting a product's journey across the supply chain can reduce the chance any errors or corruption in the supply chain. It also provides greater scalability as virtually any number of participants can access from any number of touchpoints. It will also provide better security as a shared, indelible ledger with codified rules could potentially eliminate the audits required by internal systems and processes. The Internet of Things is a network of devices which can sense, process and transfer data over the internet without any human intervention. The devices in the network can communicate with each other. It can have major impact on supply chain management. It can be very helpful in fault detection and maintenance of equipment; this can reduce the delays in the supply chain. It can also be used in asset management and tracking has the potential to increase the amount and quality of information available. It can also make inventory management more efficient and allow managers to check inventory levels at any time and receive alerts when stock gets low.

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FINANCE

Sentiments of traders/investors about the Pharma Sector

Bhushan Warang & Shreyas Vaidya – MMS 18-20, KJ Somaiya Institute of Management Studies and Research

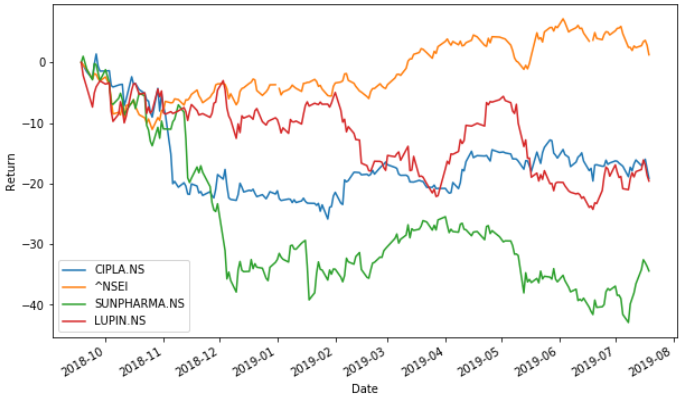
A 74 per cent drop in foreign direct investment (FDI) in drugs and pharmaceuticals for the year ended March 2019 has caused distress, as it reflects uncertainty in the market. FDI in the pharma sector was $266 million in March 19 which was a huge dip compared to $1010 million in previous year. Bhavik Narsana, Partner with Khaitan & Co, said the last six months had seen foreign companies holding back on investing in India for reasons including uncertainty over the outcome of the Parliamentary elections. Price control on drugs and devices further fanned the negative sentiment, he observed[3]. While some analyst said the absolute FDI numbers did not reveal the entire picture in terms of investments in greenfield (new projects) or brownfield (existing) projects, for instance. From September 18, Nifty pharma has dropped by 20% which include stock such as Sun Pharma, Lupin, Dr. Reddy Lab, Cipla, Piramal Enterprise, etc. thus overall market sentiment is **NEGATIVE**.

Fig (1): Nifty pharma chart

Source: Money control

Fig (2): pharma stock compare chart

Source: Yahoo finance

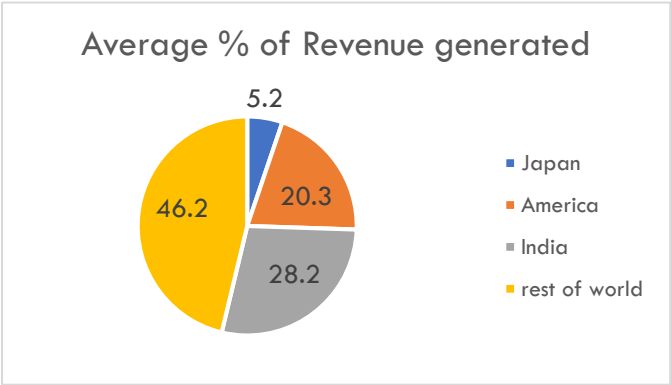


So why traders and investor have such sentiments regarding Pharma Sector?

Factors affecting the Pharma sector:

1. **US FDA Actions:** US FDA has carried out various inspections on the Indian Pharma industries citing short comings in the quality checks. Also providing observations and improvements essential for securing the license for carrying out further productions. Due to this, the companies are facing major costs in order to build the standards as per the FDA. However, this factor also is reducing the competition since, high regulations prevents small companies from entering into the market. US market is $ 80 billion among which 30% of the pharma products are from India valuing to 8 billion dollars. Thus, India is heavily dependent on US. For Indian pharma industries major chuck of revenue is generated from America Following India.

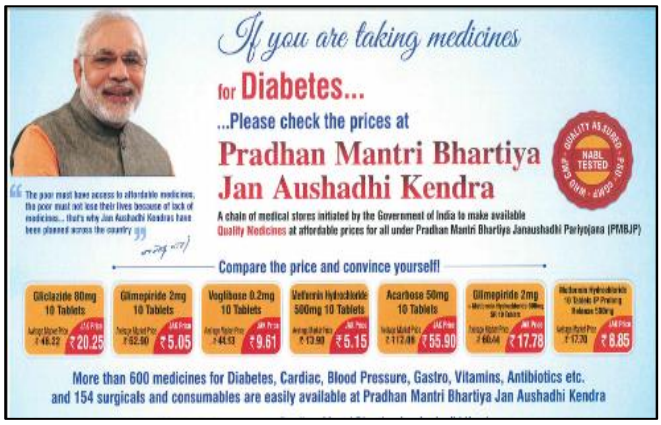
Fig (3): Average revenue country wise



Source: Bloomberg

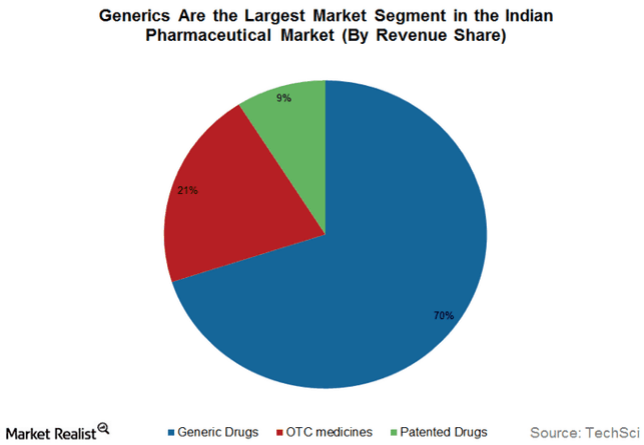
2. **Government Control:** The Modi Government is highly focussed on price controls in healthcare sector as health is the basic necessity. The production of Generic products has been increased highly whereas prices have been reduced. This is done through program called Pradhan Mantri Jan Aushadi Yojna. The government has also advised the doctors to not suggest any particular brand of the medicine to the patients as similar quality medicines of different brands at cheaper rate are available in market. However, due to the suggestion of doctors, the patients buy the exact brand medicine leading to unnecessary high payments for the same product. These factors have led to drastic reduction in the margins, leading to lesser profits.

Fig (4): Jan Aushadi yoajna



3. **Competition:** The competition in the pharma sector has been rising with many players entering the market. Now, due to the FDA actions, the small players are facing hardships for entering into the market. However, if the regulations become lenient, then there will be further rise in price for the same type of medicine. In order to survive in the market, the companies may go into price wars, leading to thinning of the margins. Due to this the investors find the sector unattractive. The pharma industry in India is more into generic business rather than focusing on the R&D. Thus, for the same product, the competition in between the companies in high.

Fig (5): Generics market revenue in india



Source: TechSci

4. **US Leadership Changes:** With the Change in leadership, USA is more focused to providing a boost to the local manufacturers. Now, about 40% of the revenues for Indian Pharma companies come from exports. Thus, if these companies don't get the approval, then the sales will fall leading to fall in revenues. The investors observe the decrease in the sales and thus causing a negative sentiment.

5. **Rupee Appreciation/Depreciation:** The Indian Pharma industry is a $ 50 Billion sector i.e. 3.5 lakh crore rupees sector.

The exports markets are $17 billion dollars or 12 lakh crore rupees. India with respect to volume ranks 3rd in the world pharma market.

Whereas overall Indian Pharma market is at 10th rank in the world. As the Indian pharma companies' revenue depends on the US exports, the Companies earn the revenues in dollars. Therefore, a slight appreciation in rupee causes major loses to the companies. However, in order to control inflation, the Indian government will always try to appreciate the rupee value. This causes a potential threat to the profitability of pharma sector.

Fig (6): USDINR chart

Source: Investing.com

6. **Fake Products:** This problem is mainly faced in the rural areas. the duplicated, non-authentic pharma products have been the major problem for the actual pharma companies. Along with the duplication, these products also eat up the market share creating unnecessary competitions for the companies.

7. **Lack of Human Resource:** The quality as well as quantity of the people joining the pharma companies has been degraded in the last few years. For cost cutting purposes, the companies have reduced the expenditure on training of employees. The lack of skilled employees leads to reduction in quality and efficiency of work, leading to increase in overall operating cost and reduction in the profits.

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MARKETING

Marketing Strategies adopted by Pharmaceutical Companies

Aditi Jaydeep Shah – MBA Pharmaceutical Management, SBM NMIMS

Marketing is both an art as well as a science which can be achieved with the help of careful planning and its execution. The value of marketing extends to the society as a whole. It helps to introduce new or enhanced products that enrich the lives of people. It is essential for building strong brands and a loyal customer base.

The strategy of the pharmaceutical companies for marketing outlines a confluence of dynamics that lead to a new marketing and sales system with a smaller, more agile and smarter sales force. For their marketing strategies to be successful, the companies need to stop aggressive marketing and employ more of customer-centric strategies instead of being product-centric. The companies invest in the development of medicines which the consumers wish to buy. They decide their strategy according to the interdependence of the payer, provider and the pharmaceutical value chains.

The marketplace has dramatically transformed from even the past 10 years with the penetration of new marketing strategies, behaviours, opportunities and challenges which have emerged in the recent years. The three main transformative forces which have currently come into the market include: technology, globalization and social responsibility. With the rapid rise of e-commerce, web penetration, mobile internet and other technological developments, the brand marketers must enhance their digital balance sheets. The new transportation, shipping and communication technologies have made it easier for the companies to sell their products anywhere in the world and increase the reach of their product worldwide.

The marketers must consider the ethical, environmental, legal and social context of their activities because the marketing's effects extend to society as a whole.

Figure 1: Technology in the healthcare sector

Source: ehealth.eletsonline.com

The pharmaceutical industry is highly regulated. It is known to adopt a wide range of marketing strategies to attract the attention of prescribing physicians as well as the consumers. The various strategies mainly focus on the marketing of the pharmaceutical products in order to enhance the sales.

In recent times, when social media has become very common, the companies have adopted the strategy of marketing their product and their company on various social media platforms. They take care of the content they post on such platforms as it is crucial to attract the attention of the prospects. They make sure they maintain a perfect balance between being publishing the appropriate content that the viewer wants to see and overly promoting their product.

Patients nowadays get information about the treatments for their diseases and conditions online. So the companies need to be sure that they address their drugs appropriately in their social media campaigns.

Figure 2: Digital Marketing by Pharmaceutical Companies

Source: https://www.socialbeat.in/blog/digital-marketing-for- pharma/

The companies build good relationships with the physicians and doctors. The reason for this is that physicians want to prescribe the pharmaceutical products from the sales representatives who they know well and trust. Having such good relationships is a key aspect of being a successful pharmaceutical marketer. The representatives of the company also provide free samples to the doctors. The reason behind this strategy is that the physicians or the doctors are able to hand out these sample products directly to the patients who will be able to try the product without risk for free. This is one of the traditional methods of pharmaceutical marketing and has been effective over the years to enhance the reach of their product in the target market.

The pharmaceutical companies have recently adopted the strategy of connecting emotionally to the customers. They create awareness amongst the customers about various conditions by launching apps and adding quality content on the website.

For such strategies, the companies must keep in mind the ethical marketing baseline to ensure that they are being respectful and responsible with the messages they spread among the customers.

The companies also reach the physicians via online communities. Attractive educational posters and other such visual aids for physicians enhances the value of their products among the patients.

The pharmaceutical companies reach the doctors and physicians during the conferences and events. They provide the information regarding the drug product of the company and also get the feedback form the physicians regarding their various products. It increases the attention of the doctors for the product. Adopting a flexible approach to the pricing of the product benefits the company in the enhancement of their profits along with considering the affordability of the consumers.

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HUMAN RESOURCES

Importance of Manpower planning in pharmaceutical sector

Adyasha Panigrahi – MBA HR, Xavier School of Human Resource Management (XAHR), Xavier University, Bhubaneswar (XUB)

The business world is at an awe with the rapidly changing trends in the pharmaceutical sector. 2019 has proved to be a remarkable year in the history of the pharmaceutical sector. Pharma is one of the most unique sectors of this world which wraps in itself a unique strategy and runs in the world with utmost growth and success. Pharma industries are very essential to mankind's survival and that's one of the reasons that the industry ensures to wear the crown of being the king in the market. Let's take a look over the recent changes and trends of this sector. The Pharma industries are getting restructured and are positioning themselves differently as the old franchise declines. There have been many budding opportunities presented by the new bio pharma companies and inventions in the clinical science. The whole R&D has to be re-strategized and the manufacturing plants have to be re-looked. The world getting tech savvy day by day, Artificial Intelligence seems to soon delve into pharma too. This would foster the decision-making process of the industries. The drug development efficiency is going to enrich and would save time that usually got invested in doing numerous research work. Soon the industry would get data driven and identifying the correct patterns of data and drawing out insightful information becomes important. There has been a pricing pressure all around in the pharma sector as the whole process of getting patents has become simpler and easier. There have been many shutdowns as many strong players started finding juggling in the market very difficult and could observe a slower market expansion from their side. All these players while facing trouble in pacing up the market with their traditional product portfolio have started trying up with the new VAM (value added medicines). Again, putting up VAM in front of stakeholders and convincing them of their magic is a tough job to start with. The change in the concept of life cycle management. Launch, growth, maturity and decline, but now there is another concept of surviving in the market after the patent expires and no one is ready to stick to smaller market shares, which initiates heavy discounting by the originators. The growth rate of pharmaceuticals in China is a threatening fact because soon they will play a major and significant role in the arena of biopharmaceuticals. Now the question is how these major trends are going to be accommodated and still blow the whistle of survival? The only answer to this is – MANPOWER PLANNING. There are many HR terms for the same personnel or talent management. Employees are the building blocks of all the significant business decisions and manpower planning is not that an easy task that it seems from the name. Recruitment is preceded by major plans. Organizations need to have a strategy which helps us fix the positions and positions drive the recruitment. As per the recent trends of this sector, such talent should be recruited who can adapt to the changing environment. Their mindset should be flexible and they themselves should be agile enough. The pharma industry is known to have a very strong internal succession planning. There is a dire need of changing this strategy and welcoming fresh minds. AI, machine learning everything is delving deeper into the sector, talent who is ready to face true feedbacks with a dire urge to learn and innovate new is mandatory. As mentioned, the upcoming trend of the pharma sector becoming

data driven points out to the need of good analytical skills imbibed in the employees. Knowledge no doubt remains one of the most important aspects while searching for talent but in addition to that the individual should have

interest and passion for working in this field. He should have the urge to go beyond what's mentioned in the JD (Job Description). With the talk of diversity all around, a population which accepts and respects differences with utmost humility and works conscientiously with team collaboration is what this sector is in need of. At the end I would conclude by saying that manpower planning is not a one-day game, it is a continuous process. The world and its economics are changing at a rapid rate and an organization has to keep itself updated to stay alive in the market. The talent of the organization plays a key role in affecting the conduct of the business, a very accurate and planned strategy has to be crafted for the same. Though strategy can have many definitions as per Mintzberg's 5P of strategy (plan, ploy, pattern, position, perspective), interrelating them and coming out with appropriate job positions to be filled is required. In short, it's nothing but exactly similar to Darwin's theory of survival of the fittest.

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GENERAL MANAGEMENT

Impact of regulations on pharmaceutical industry

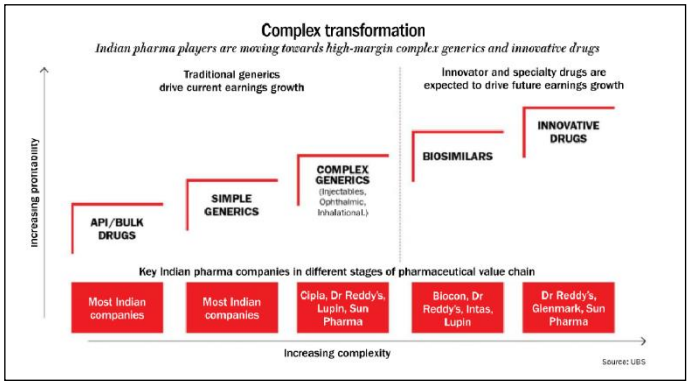
Ruchi Agrawal – Business Management, Xavier Institute of Management, Bhubaneswar

Indian Pharma companies aced the low-cost manufacturing model for generic drugs and supplied to biggest importer US. Indian pharma companies used the re-engineering process and produced generic drugs at 15-20% lower than what an average US industry spent. But the incessant thrust by US government on low pricing couldn't keep the acceleration forever. In 2009, Ranbaxy Laboratories situated at Himachal Pradesh was caught falsifying data and led to 25 drug approvals. This set a tipping point for pharma sector as probing was often and quicker than before by US Food and Drug Association. To combat the issues and look for new ways to serve US market, companies started investing in money guzzling complex generics and specialty drugs space. India has highest number of FDA-approved finished dosage facilities. These facilities adhere to high standards. In FY 18, USFDA granted the highest number of drug approvals in its history with Indian companies accounting 35-40% of them. Total US pharma market stands at $480-500 billion and generics accounting for $70 billion and the rest coming from innovator products.

Pharma companies in generics market are vertically integrated players, own pharmacies and have strong relationship with hospitals. There was downward pricing in US market and Teva and Mylan started rationalising their products. Companies started withdrawing ANDAs or holding off product launches. Early this may, pharma majors found their names in an anti-trust lawsuit filed by 40 US States. Pharma companies were Aurobindo Pharma, Zydus, Glenmark, Dr Reddy's, Lupin, Wockhardt, and Taro Pharma (Sun Pharma's subsidiary).

The charge was colluding to inflate prices by over 1000%. Politicians in US have also turned hostile and started pushing very hard to restrict the presence of Indian pharma companies.

With the changing times, pharma majors have set the sail in the direction of complex generics and speciality drugs market. As not all the pharma industries are aiming for this, major ones are aiming for better margins around 20-40%. Generics, on the other hand, may yield just 8-10% as average operating margin. Developing a complex generics portfolio is very expensive compared to a generic. The time period for complete approval and is about five years during which the money is completely locked. However, USFDA guidelines released in October 2018 indicates faster approvals for complex generics. The regulator's interest to develop complex generics market comes with clarity on how to expedite approvals for complex transdermal products and topical products.



Companies like Lupin, Sun Pharma and many other have adopted the inorganic growth route into investing in complex generics. Companies are eyeing to a particular product's strength and build relevant product portfolio.

Companies are taking a strategic shift and investing more on R&D to develop their own specialities. The pharma market doesn't face any competition from China. India files over 200 ANDAs in the field of ophthalmology in US and China barely makes it to 30. The recent US-China Trade war has brought many opportunities to India. [3]US is reliant on China for bulk drug requirements and China is dependent on US for drug formulations import. India has contributed only .1 % to drug formulations in China compared to 15% by US. The Indian Pharma Industry can take advantage of this situation as it has proven abilities in both drug formulations and bulk drugs category. Bulk requirements are being served by China dominantly because of their cost efficiency model and hence Indian companies can improve and grab the opportunity.

Pharmaceutical supply chain is a unique supply chain in which drugs are produced, transported and consumed. Pharma Industries can use sensors to track temperature and humidity conditions, track and trace mechanism and improve in-transit visibility. This connectivity can be extended to warehouses and even better management. Leading organization have deployed barcoding/RFID tags in supply chain especially in inventory management, product serialisation, following track and trace regulations, speeding up the picking process, space planning and demand planning. Robotics has the potential for precision involved activities like vial fillings, test tube movements and many more.

Technology is contributing to transformation and beyond human capabilities achievement in pharmaceutical sector. Efforts in Indian industry has been laid to capture data from various information systems like Hospital Information System(HIS), Enterprise Resource Planning(ERP), Lab Information System(LIS), Radiology Information System(RIS). With support of technology it is possible to diagnose and analyse data. For increased efficiency, healthcare organizations face issue in standardizing the information captured.

Hence organizations are moving towards adopting uniform standards and terminologies. Moreover, there is a realised need for collaboration in healthcare industries to bring the technology and products collaboration and hence improved service to their customers.

Healthcare organizations can further use technology and connect to customers with most common needs like mother and child care, diabetes, and heart disease patients in the Indian market. Health insurance companies have already taken steps to promote proper tracking and risk control mechanism by suggesting wearable devices in day to day life. These help companies to reach to customers in advance. Healthy habits are promoted by them. Ambulance used to bring patient to hospital can be enabled using Internet of Things (IoT). These sensors capture data critical to patient's life and well before analyses the urgency of situation. In India, traffic in metro cities causes a major problem for the patient to reach in the right time and so such sensors can bring huge impact.

Global Pharma packaging market is another important area and is expected to grow at a CAGR of 6.27% from 2016 to 2022. Biologics are considered to be future of pharma. In it, no more mass generic drug production will be focus rather tailored products will be produced in small batches. Biologics are temperature sensitive and vulnerable to contamination, because of this packaging design will be even more difficult. The latest regulatory requirements called for serialisation and aggregation, serialisation and tamper-evident feature on packaging lines and packaging materials by US and European Union which forms the major market. To keep off the regulators faced, pharma companies have to evolve and innovate in every sphere. Due to old age syndrome and forgetfulness, patients do not adhere to given discipline of dosage by the doctors. To add value to this regime, packaging is trying to innovate and keep both doctors and patients convinced. Hence the QR mode adopted to connect to their website and update on when to consume and risks involved.

RFID technology also finds its importance to store and retrieve patients' histories and eliminating errors due to manual entry. This extended to criminal activities like drug diversion will make more difficult. This secure document stores data about each move a product makes along the supply chain.

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CALL FOR ARTICLES

We invite articles for the July 2019 Issue of SAMVAD.

The Theme for July month- "**Shipping Industry**"

The articles can be from Finance, Marketing, Human Resources, Operations or General Management domains.

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