Journal of Advanced Multidisciplinary Research Studies and Development

ISSN : 2583-6404
Jan - Feb 2025

PLAY OF FACTORS LIKE CULTURAL NUANCES, POLITICS AND ECONOMIES ON THE GLOBAL BIOPHARMACEUTICAL BUSINESSES: LESSONS OF VACCINES AND BIOPHARMACEUTICALS IN THE LAST DECADE

Dr. Salil Sabnis
Associate Professor & Head – Dept. of Business Administration, RCPIPER, Shirpur, Dhule.
Email: emailsalil@gmail.com

Abstract
Biopharmaceuticals are among the most advanced and spectacular achievements of modern science. The complex structures of drugs using modelling technology used to design them makes their performance, in-vivo, remarkably well; offering high efficacy and few side effects1 (Rapid growth in biopharma - challenges and Opportunities - McKinsey & Company 2014). Biopharmaceutical technology comes at huge costs. Large-scale biotech-manufacturing facilities require $200 million to $500 million or more to build, compared to similar-scale small facilities that may cost just $30 million to $100 million with years to build. These facilities are costly to run, with long processes, low yields, expensive raw materials and the need for a team of highly skilled experts for operations. There are myriad reasons the rapid growth and increasing importance of the industry is producing new challenges and opportunities. To keep pace, biopharma players must revisit and fundamentally reassess many of the strategies, technologies and operational approaches they currently use1 (Rapid growth in biopharma - challenges and Opportunities - McKinsey & Company 2014). The biopharmaceuticals generated global revenues of USD 421.58 billion in 2024, and expected to touch USD 474.28 billion in 2025; making about 29% of the pharma market (pharma market approx.. $1600 bn); by far the fastest-growing part of the industry: biopharmaceuticals current annual growth rate of more than 12.5% is double that of conventional pharma and growth is (ABPI, 2016)expected to continue at that rate in the future1 (Rapid growth in biopharma - challenges and Opportunities - McKinsey & Company 2014) and 8(Towards Healthcare, 2025) Out of the total biopharmaceuticals, vaccines account for US $69.21 bn by 20259. (Statista, 2025) The current abstract analyses the trends, attractiveness with the background of the world biopharmaceutical businesses, the top 10 biopharmaceutical businesses globally, business performance of the same industry in the top economies and finally the most important - the huge impact of cultural nuances, politics on the economies of biopharmaceutical businesses with examples.

Keywords: Biopharmaceutical economy/economies/business, PEST factors and biopharmaceuticals, biopharma, biopharmaceuticals, global biopharmaceuticals, cultural/political impact on biopharmaceuticals, opportunities biopharmaceuticals, and pharma drugs industry, top 10 biopharma.

► *Corresponding Author: Dr. Salil Sabnis*

Introduction

Today biopharmaceutical industry globally churns out $163bn which is 20% of the global pharma market. It is by far the fastest growing-part of the industry: biopharma's current growth rate of 8% is also the fastest as compared to the conventional pharma industry[1] (*Rapid growth in biopharma - challenges and Opportunities - McKinsey & Company* 2014).

ISSN : 2583-6404
Jan - Feb 2025

Investing in biotech R&D also has a good revenue pipeline. There are approximately 1500 biomolecules under clinical trials and the success rates are twice that of the pharma-pipelines. This will increase the market launch of at least 15 molecules in a year more than the conventional pharma products as the FDA gets more nods than ever[1] (*Rapid growth in biopharma - challenges and Opportunities - McKinsey & Company* 2014).

There are host of factors that are forcing the pharmaceutical companies to change their focus from conventional pharma to the biopharma way. The companies that were selling conventional pharmaceutical molecules now are moving to better biopharmaceutical drugs/biologicals as the potential dependence of these molecules rakes in higher equity.

Global Biopharmaceuticals: Organizations & Markets

The top biopharma/pharma companies globally include the ones presented in Fig-1 and Fig-3[2] P (2015):

Ranking	Biotech/Pharma Company	Revenues Per Annum ($ Bn)	Country Origin	Successful drugs	Therapeutic Areas
1	**Johnson & Johnson**	74.331	USA	182 drugs. Leaders in Hep-C, HIV/AIDS, arthritis	Virology, immunology, auto-immune disorders, gastroenterology
2	**Novartis**	57.996	Switzerland	Gleevec, Gilenya	Biologics, vaccines, transplant therapies, nephrology, pediatrics, oncology
3	**Roche**	49.86	Switzerland	MabThera, Avastin, Herceptin, Xeloda	Diagnostics, oncology, nephrology, personalized medicine
4	**Pfizer**	49.605	USA	Prevnar, Celebrex, Lipitor, Viagra. Hospira products	Vaccines, cardiology, immunology, oncology
5	**Sanofi**	43.07	France	Lantus-Insulins, Clexane, Allegra	CVS, CNS, OTC, diabetes, internal medicine, oncology, thrombosis, vaccines

ISSN : 2583-6404
Jan - Feb 2025

6	**Merck**	Germany	42.237	Keytruda (onco), Belsomra & Zerbaxa (insomnia),	Oncology, neurogenerative diseases, fertility, endocrinology
7	**GlaxoSmithKline**	USA/UK	37.96	Rotarix, Cervarix, Malaria, Ebola Vaccines. Global leader in Vaccines	Vaccines, consumer healthcare, cvs, respiratory, asthma, oncology, infectious diseases, mental health, diabetes and gastroenterology
8	**Astra Zeneca**	UK	26.095	Crestor (cholesterol treatment), Symbicort (asthma), Nexium (heartburn),	Oncology, cvs, gastroenterology, neurology, respiratory, inflammation
9	**Bayer**	Germany-Leverkusen	25.47	5000 products. Xarelto (anti-coagulant), Eylea, Stivarga & Sofigo (onco), Adempas (pulmo-arterial-hypertension)	Human-, veterinary, consumer healthcare & OTC, agriculture
10	**Gilead Sciences**	USA		Sovaldi (hep-c drug), HIV-AIDS	Anti-virals, cvs, respiratory, hepatology, oncology

Fig-1: Ranking of top 10 global biopharmaceutical companies[2]P (2015)

The global biopharma markets are majorly the developed countries with developed capabilities and expertise in the biopharmaceutical arena. USA tops the list of such industry being the leader in the same. With reference to the Fig-1, we infer the leadership of USA among the top biopharma companies globally.

In the following Fig-2 the lists of top biopharma markets globally[3] (ABPI, 2016)[,]. This leads us to infer about the capacity to lead the biopharma markets with all the aspects of biopharma industry success factors like, culture of innovative research & development, continuous education & expertise development for skilled manpower, dedicated universities for such education supported by government policy, space for biopharma sectoral policy development, supportive regulation and business facilitation by the biopharmaceutical community in that country. This in turn is

influenced by political will and thus impacting the economy positively thereby boosting the biopharma industry.

	2013			2011		
Country	Rank	$ (Mill)	Growth (%)	Rank	$ (Mill)	Growth (%)
USA	1	339,694	4	1	3,31,476	4
Japan	2	94,025	-16	2	1,11,642	16
China	3	86,774	16	3	66,794	22
Germany	4	45,828	9	4	44,698	6
France	5	37,156	1	5	39,957	4
Brazil	6	30,670	5	7	31,102	18
Italy	7	27,930	6	6	28,656	8
UK	8	24,513	16	10	20,850	3
Canada	9	21,353	-3	9	22,334	3
Spain	10	20,741	4	8	22,706	2
Source: IMS World Review Analyst 2014						

Fig-2: Top global biopharma markets[3] (ABPI, 2016)

Rank	Diff.	Co.		2024	2023	2022	2021	2020	2019	2018	2017	2016	2015
1	0	Johnson & Johnson	USA	88.82 [1]	85.16 [2]	79.99 [2]	93.78 [3]	82.59 [3]	82.06 [4]	81.60 [5]	76.50 [6]	71.89 [7]	70.10 [8]
2	0	Sinopharm	CHN		84.06 [9]	80.19 [10]	75.68 [10]	71.75 [11]	60.18 [12]	48.75 [13]	43.63 [14]	36.56 [15]	32.36 [16]
3	0	Roche	SUI	66.42 [17]	68.48 [18]	69.77 [19]	67.83 [20]	62.99 [20]	63.85 [21]	56.86 [22]	57.37 [23]	50.11 [24]	47.70 [25]
4	0	Merck & Co.	USA	64.17 [26]	60.12 [27]	59.28 [28]	48.70 [29]	41.52 [29]	46.84 [30]	42.30 [31]	40.10 [32]	39.80 [33]	39.50 [34]
5	0	Pfizer	USA	63.63 [35]	59.55 [35]	100.33[36]	81.29 [37]	41.91 [38]	41.17 [38]	40.83 [38]	52.54 [39]	52.82 [40]	48.85 [41]

ISSN : 2583-6404
Jan - Feb 2025

6	0	AbbVie	USA	56.33 [42]	54.32 [43]	58.05 [44]	56.20 [45]	45.80 [45]	33.27 [46]	32.75 [47]	28.22 [48]	25.56 [49]	22.82 [50]
7	0	Bayer	GER		51.72 [51]	53.88 [52]	49.46 [53]	47.40 [54]	48.02 [55]	45.06 [56]	37.94 [57]	25.27 [58]	24.09 [59]
8	**Up**	AstraZeneca	GBR	54.07 [60]	45.81 [61]	44.35 [62]	37.42 [63]	26.62 [64]	24.38 [65]	22.09 [66]	22.47 [67]	23.00 [68]	24.71 [69]
9	1	Novartis	SUI	50.32 [70]	45.44 [71]	50.55 [72]	51.63 [73]	48.66 [73]	47.45 [74]	44.75 [75]	49.11 [76]	48.52 [77]	49.41 [78]
10	**Up**	Bristol Myers Squibb	USA	48.30 [79]	45.01 [80]	46.16 [81]	46.39 [82]	42.52 [82]	26.15 [83]	22.56 [84]	20.80 [85]	19.43 [86]	16.56 [87]
11	Up **4**	Eli Lilly & Co	USA	45.03 [88]	34.12 [89]	28.54 [90]	28.32 [91]	24.54 [92]	22.32 [93]	21.49 [94]	22.90 [95]	21.22 [96]	20.00 [97]
12	Dn 4	Sanofi	FRA	42.68 [98]	46.84 [99]	46.86 [100]	43.24 [101]	41.27 [102]	39.28 [103]	39.07 [104]	42.91 [105]	36.57 [106]	36.73 [107]
13	Dn 1	Abbott Laboratories	USA	41.95 [108]	40.11 [109]	43.65 [110]	43.08 [111]	34.61 [112]	31.90 [113]	30.60 [114]	27.39 [115]	20.85 [116]	20.41 [117]
14	Up 2	Novo Nordisk	DEN	40.52 [118]	33.83 [119]	25.46 [120]	21.66 [121]	19.52 [121]	18.30 [122]	6.99[123]	18.77 [124]	16.61 [125]	16.06 [126]
15	Dn 2	GlaxoSmithKline	GBR	39.28 [127]	38.63 [128]	36.14 [129]	46.91 [130]	46.17 [131]	43.92 [132]	43.14 [133]	42.05 [134]	34.79 [135]	29.84 [136]
16	Dn 2	Shanghai Pharmaceuticals	CHN		36.68 [137]	32.33 [138]	31.82 [139]	29.29 [139]	27.50 [139]	23.45 [139]	19.28 [139]	17.80 [140]	15.55 [140]

ISSN : 2583-6404
Jan - Feb 2025

17	0	Takeda Pharmaceutical	JPN		30.24 [141]	30.34 [142]	29.31 [143]	27.76 [144]	31.17 [145]	19.10 [146]	16.70 [147]	15.96 [148]	14.93
18	0	Amgen	USA	33.42 [149]	28.19 [150]	26.32 [151]	25.98 [152]	25.42 [153]	23.40 [154]	23.70 [155]	22.80 [156]	22.99 [157]	21.66 [158]
19	0	Boehringer Ingelheim	GER		27.70 [159]	25.90 [160]	22.50 [161]	22.40 [162]	21.75 [163]	21.67 [164]	17.54 [165]	16.41 [165]	17.70 [165]
20	0	Gilead Sciences	USA	28.75 [166]	27.12 [167]	27.28 [168]	27.31 [168]	24.69 [169]	22.45 [170]	22.13 [171]	25.70 [172]	30.39 [172]	32.15 [172]

Fig-3: Top global biopharma companies with ranking from 2015 till date[10] (Annual reports biopharma companiescross reference, 2025)

Complexity, IPR and Manufacturing Landscape

Biopharmaceutical molecules are relatively complex as compared to chemical entities in conventional pharmaceutical products[1](*Rapid growth in biopharma - challenges and Opportunities - McKinsey & Company* 2014).

The pharmaceutical products, for example, Aspirin having 21 atoms compared to biopharmaceutical molecules having atoms ranging anywhere between 2000 to 25000[6]. These biopharmaceutical molecules are derived from living cells which act as machines to produce the same molecules and require sophisticated technological expertise to separate these molecules from the living cells in the reaction vessel. These fragile living cells also should not be damaged as some of these may be needed to be separated and preserved for future use without destroying their fragile structures[6]. Such quality of production also makes it harder to replicate the quality and conformance elsewhere, therefore, protecting the commercial value in terms of IPR.

With disruptive technologies and innovations like the immunotherapies, antibody drug conjugates, and gene & cell therapies all making commercial launches in the years to come[6]. Biopharma is about to make a big splash in the near future as there is now an increasing understanding between the drug interactions and the genetic make up of the individuals. This would be to improve the targeted therapy and healthcare outcomes in a treated individual or treated groups[4] *(Mukherjee, 2015).*

Affordability Economics, IPR and Supply Chain Dynamics

As the biopharma business moves from the scientific frontiers to the mainstream business, it has to face challenges that the market wants maintaining competitiveness, affordability, quality and delivery performance[1](*Rapid growth in biopharma - challenges and Opportunities - McKinsey & Company* 2014).

ISSN : 2583-6404
Jan - Feb 2025

Downward cost pressure will intensify as the healthcare system struggle to balance higher demands with lesser or flat budgets. In this environment, payers may find it difficult to justify the annual treatment costs $50,000 to $100,000 that some bioproducts that currently demand[1].

The emerging markets know the true value for boosting the healthcare outcomes & demand for these kind of drugs and therefore, find out alternatives to fulfill the same. The result of these pressures will be inevitable in such industry[1](*Rapid growth in biopharma - challenges and Opportunities - McKinsey & Company* 2014).

Another challenge is the patent protection on complex biosimilar drugs. For example the EU approved Remsia, Celltrion's biosimilar version of the monoclonal antibody Remicade. In emerging markets, consumers will be able to access the molecules only if these molecules have a lower price range. The enthusiasm for these molecules will be even higher than expected and is likely to generate pressure to make such molecules available on lower prices exerting pressure on the cost of goods sold and therefore, forcing the innovators to find out ways to meet such demands[1](*Rapid growth in biopharma - challenges and Opportunities - McKinsey & Company* 2014).

High premium on these biopharmaceutical products and the relatively smaller share of revenues have led to industry-wide challenges in the supply chain. Cost, complicated drugs, systems are stretched from the standard molecule practices, considering the additional cold chain necessities[1](*Rapid growth in biopharma - challenges and Opportunities - McKinsey & Company* 2014).

Such are the roles of distribution dynamics. The biologics and vaccine products form a major chunk in such strategies.

The new classes of molecules including gene therapy requires new regulations, distribution and other systems. Much companies take these molecules and put much efforts in manufacturing, commercializing, setting up marketing systems. Making the right decision about how to set up operations for an autologous cell is not an obvious exercise, and there will naturally be sub-optimal solutions before sufficient experience is built[1](*Rapid growth in biopharma - challenges and Opportunities - McKinsey & Company* 2014).

Quality Compliance and Regulations

Quality functions are struggling to keep up with the rising demands of the regulators, primarily the US Food and Drug Administration and others like the UKMHRA, EU-regulatory authorities, the South African Regulatory Authority. The industry keeps up with numerous warning letters issued by these authorities and the scrutiny/assessments will increase by the years to come. The increase in the relevance of the global markets (beyond USA, EU and Japan) is adding the complexity of multiple quality standards and regulatory regimes. Compliance robustness of processes and efficiency will have to be integrated for uniformity. This regime is likely to tilt the weight towards emerging countries.

Cultural Nuances, Politics and Related Strategies

Culture refers to the collective resultant aspect of knowledge, ideas, customs, behavior, rituals, arts and other manifestations of human intellectual achievement with regards to a particular region, nation, group, formal / informal associations, races or tribes.

Dutch social social scientist Gerard Hendrik Hofstede (2 October 1928 – 12 February 2020), an IBM employee, Professor Emeritus of Organizational Anthropology and International Management at Maastricht University in the Netherlands[10], (Hofstede, n.d.) known for his seminal

ISSN : 2583-6404
Jan - Feb 2025

work on cross-cultural groups and organizations[11]. (Esther-Mirjam et al., n.d.). Hofstede's work was based on his research on national cultural preferences. His model has six key dimensions - the Power Distance, Individualism vs. Collectivism, Masculinity vs. Femininity, the Uncertainty Avoidance Index, Long-Term vs. Short-Term Orientation, and Indulgence vs. Restraint[10], (Hofstede, n.d.) Each dimension highlights how cultures differ in terms of authority, social relationships, achievement focus, tolerance for uncertainty, time orientation, and levels of self-control. This was studied with factor analysis through employees and cultural values across nations.

Given the definition and context, it becomes imperative to know the finer cultural nuances or aspects that form an emotional connect with the local population. These aspects could be their habits that form their behavior and ultimately their character. This is directly linked to various health related parameters that may become a national issue and therefore a need gap identification for a biopharmaceutical industry. To cite an example, let us study polio eradication programme in India[5] (David & Times Of India, 2014).

Polio Eradication Programme, India

It is an achievement for India that there has been no reporting of a single polio patient in the last 3 years, this has led to the distinction for the WHO south east Asia as a certified polio free region. In 2012, India was taken off the global list of polio-endemic countries which reduced to three. With the certification of the Southeast Asia region now, four of the six WHO regions will become polio-free, leaving only WHO's African region and EasWHO, in collaboration with the government of India, established the 'National Polio Surveillance Project' (NPSP) in 1997 to provide technical support in key areas of surveillance for polio and mass vaccination campaigns[5]. The following were the success factors:

- NPSP's role expanded to include additional areas such as routine immunization, polio-free certification and end-game strategy. Cross-cutting areas include evidence generation, research and immunization monitoring, programme strategy development, capacity building of government staff, accreditation of laboratories and providing timely feedback to government for action at all levels[5] (David & Times Of India, 2014)
- Mass awareness was created by banners, posters, hoardings and engaging celebrities through television and radio. Newspaper advertisements in local languages also created awareness. Vaccinators were trained to enhance their interpersonal skills, so they could mobilize communities better[5] (David & Times Of India, 2014)
- In some resistant areas where the community would refuse to help, these areas were encouraged to involve the local, religious and opinion leaders [5] (David & Times Of India, 2014)
- To ensure that no polio positive patient emerges, mass vaccination programmes were implemented - India is in a state of emergency preparedness to respond urgently to any importation[5] (David & Times Of India, 2014)
- The government also recently made polio vaccinations a prerequisite for travellers of seven polio-affected countries coming to India to mitigate importation risks[5] (David & Times Of India, 2014)
- The strong will of political leaders and support of international partners like WHO, Unicef and Rotary International played a critical role in the initiative in India. The contribution of committed, hardworking frontline workers, who implemented innovative strategies for improved vaccination coverage, and the involvement and support of communities[5] (David & Times Of India, 2014)

On 27 March 2014, the World Health Organization (WHO) declared India a polio-free country with no case of disease having been reported in the last three years[5] (David & Times Of India, 2014).

Polio free India status has encouraged people from Nigeria, Afghanistan and Pakistan to follow on the initiatives taken by India and indigenous innovative strategies that could be replicated. The programme now serves as a model for health programmes globally - it's demonstrated that it's possible to achieve ambitious health goals through high vaccination coverage, even in areas with weak health systems.

Such is the power of cultural, political and economical factors that affect millions of people in a biopharmaceutical industry. This was a governmental initiative which can be replicated in a private set ups. The message take-away from the above is the fact that political will, infrastructure availability, overcoming local cultural/traditional barriers, fears combined with skilled manpower availability and mass mobilization for a 'common good cause' made the program successful.

The emergence of single factor that can transform a community, country or groups will be a deciding aspect of a successful implementation of a healthcare programme by support of an expert biopharmaceutical group.

This serves a dual purpose – a community service, transformation of an image of a leading biopharmaceutical company and to top it all an immense learning experience.

The above strategies are being adopted by companies like GSK, Bharath Biotech and Shantha Biotechnics Ltd. to introduce vaccines that are needed to combat a lurching perrenial problems like malaria, chikun gunia and rotaviral infection[3] (ABPI, 2016).

SARS-CoV-2 Pandemic

Also, with reference to Hofstede's Cultural Dimensions, the global culture united during the SARS-CoV-2 pandemic during 2019 to 2020. Fast approval process for approval of much needed vaccines addressing the deaths caused due to the panic in the pandemic.

More than 7 million people died of coronavirus infection so far worldwide and more than 675 million patients recovered by the infection.[7] (WHO)

In view of decline in the COVID-19 vaccine consumption in 2022, vaccines continue to amount to command a 60% fraction of world vaccine volume. Total volumes, excluding COVID-19 vaccines were approximately 5 billion doses (these volumes matched 2021 & pre-pandemic era). Only 10 manufacturers alone provide 75% of vaccine doses (excluding COVID-19 vaccines) and capturing 85% of the global value, and other 80 manufacturers serving the remaining market[7]. (WHO)

As the revenues of COVID-19 vaccines declined in 2022, (AZ, Sinovac, China National Biotec Group [CNBG]), Sinovac COVID-19 revenues dropped to US $ 1.5 billion from US$ 19 billion. This triggered increase in the other major COVID-19 vaccine suppliers (e.g. Pfizer, Moderna) and the International Federation of Pharmaceutical Manufacturers & Associations (IFPMA) manufacturers maintained a high market share (by value), nearly 80% of the market in 2022[7] (WHO)

Pfizer obtained a market share of 26% of the market, from 16% in 2021, and the Chinese manufacturers Sinovac and CNBG declining sharply. Attributed to decline in COVID-19 vaccine sales (China and Indonesia) with meafre increase of Pfizer COVID-19 vaccine sales in 2022 against 2021, resulting in Pfizer obtainibg a larger share of the market. The Serum Institute of India's share of global volumes, excluding COVID-19 vaccines, increased to 24% from 19% in 2022 from 2021 respectively[7]. (WHO)

ISSN : 2583-6404
Jan - Feb 2025

New bio-technology processes helped significantly for the COVID-19 vaccine production. The present market is highly skewed on nine manufacturers (10% of global manufacturers) which have more than five vaccines and have global distribution with technology. Together, these vaccine producers gained a market volume of 70% of global supply in 2022, excluding COVID-19 vaccines. Among these, three are based in India (South-East Asia Region), four in the Americas, European Region, and one is in the Western Pacific Region[7]. (WHO)

India has played a significant role in contributing manufacturing and supply of quality vaccines globally. The major global vaccine players from India are – The Serum Institute Of India and the Bharath Biotech India Ltd. These companies came into prominence post the COVID pandemic as they helped substantially for global supply of quality vaccines such as 'Covishield' and 'Covaxin'. This achievement came into reality through the government machinery, political will and ministry of healthcare that supported the research, development, approvals and infrastructure for the same. Indian manufacturers accounted for 25% of total global volumes, 60% of which are consumed domestically, and significant portions delivered to the WHO African Region, accounting for approximately 20% of its domestic shipments outside India[7]. (WHO)

Evolution of a Booming Industry

These trends will fundamentally reshape the biopharmaceutical industry. The changes will be different for all. A variety of business archetypes will coexist in the industry, their strategies and success factors will differ in important ways.

Global innovators will have to drive product innovation for command premium pricing, shifting the frontier of technology and exploring new operational setups (design & development of new set ups). Biosimilars will have to focus on cost, quality and scale.

Players in the emerging markets will have to find their own niches with right operational, quality and regional/ traditional nuances so as to make the therapy more population specific. Contract manufacturing will have to develop state-of-the-art operational, quality and delivery excellence to fit into the pressures of cost leadership, niche segment of operations and given the political, regulatory landscape.

The biopharmaceutical companies which are poised for success will have to develop systems, processes, strategies focused on their unique placement, positioning in the market place. This will also be coupled with the stand that the company needs to take in the entire scheme of things. This will be cultural, political and local economies that will pave way for long term foundation of the companies.

An entire discussion on the technical, operational excellence of the biopharmaceutical company will be beyond the scope of the current paper. Nonetheless, following are the points that needs to be evaluated before even we start thinking of taking a global biopharmaceutical company to the new level:

- Studying the regional landscape where the company and people are located. This plays a major role in the deciding the local talent available. The culture plays a major role here as it has a direct bearing on the level of education and developing of passionate individuals for such type of work. A well qualified and skilled staff will always be an asset to an organization to contribute towards growth. In marketing and sales side, a successful contemporary pharma sales rep has to be able to show a sophisticated understanding of therapies' scientific merits and be able to communicate patient-centric and value-based outcomes. He or she must also understand the cost-conscious landscape that payers and government health programs are operating in.

ISSN : 2583-6404
Jan - Feb 2025

- Political environment plays a major role in taking the formed biopharma entity to the new level. The organization needs to comply with the local needs and development of the local population in terms of understanding the healthcare needs and finding a solution to help reduce suffering. This will act as a positive pressure in increasing political will and thereby support expanding the organizational operations
- The understanding of the micro & macro economic factors of the region is extremely crucial in deciding the commercial strategy of a biopharmaceutical organization. For example, globally the focus is apparently shifting towards emerging economies given the positive growth rates in their production capacity/GDP, target population that are greater than the developed economies[6]. India and China are two countries that are targeted as future growth areas[6, 4]. Given this fact, it will be useful to consider what percentage of healthcare budgets as a percentage of the GDP (for e.g., in India the total spending on healthcare is only a miniscule 5% to 7% of the GDP which is higher in China and other emerging countries like the Brazil, Venezuela, Mexico etc.) [6] (CIA, 2015)

To sum up, successful biopharmaceutical companies would be smart enough to factor local cultural nuances, evaluate & facilitate political will, put an effort to reduce COGS (cost-of-good-sold)[1], comply to regulations in addition to compulsory and 'must-haves' like – promising R&D pipelines[3] (ABPI, 2016),[5] (David & Times Of India, 2014), technical expertise & operations, marketing & sales strategies that impact its score card, appraisal and ultimately the net positive biopharmaco-economy.

References

1. Rapid growth in biopharma - challenges and Opportunities - McKinsey & Company. (2014). Rapid-Growth-in-Biopharma-Challenges-and-Opportunities-McKinsey-Company
2. P, H. (2015, June 15). *Top 10 pharmaceutical companies in the world*. blog.proclinical.com. Retrieved February 10, 2024, from http://blog.proclinical.com/who-are-the-top-10-pharmaceutical-companies-in-the-world
3. ABPI. (2016). Global pharmaceutical industry and market. *www.abpi.org.uk*. Retrieved February 5, 2024, from http://www.abpi.org.uk/industry-info/knowledge-hub/global-industry/Pages/industry-market-.aspx
4. Mukherjee. (2015, October 1). Top 10 trends driving the biopharma industry today. *www.biopharmadrive.com*. Retrieved January 6, 2024, from http://www.biopharmadive.com/news/10-top-trends-driving-the-biopharma-industry-today
5. David & Times Of India. (2014, March 26). India's success in polio eradication is a model to the world: Dr Nata Menabde. The Times of India. *www.toi.com*.
6. CIA. (2015). *The World Fact Book - CIA*. www.cia.gov. Retrieved February 5, 2024, from https://www.cia.gov/library/publications/the-world-factbook/geos/in.html
7. WHO. (n.d.). Global vaccine market report, 2023 Update. *WHO Working Draft - December 2023*, 15.
8. Towards Healthcare. (2025, March). *Biopharmaceuticals Market Size, Growth & Business Strategies*. Retrieved from Towards Healthcare: https://www.towardshealthcare.com/insights/biopharmaceuticals-market-is-rising-rapidly
9. Statista. (2025, March). *Vaccines- worldwide*. Retrieved from statista.com: https://www.statista.com/outlook/hmo/pharmaceuticals/vaccines/worldwide
10. Annual reports biopharma companiescross reference, W. (2025, March). *List of largest biomedical companies by revenue*. Retrieved from Wikipedia.com: https://en.wikipedia.org/wiki/List_of_largest_biomedical_companies_by_revenue

ISSN : 2583-6404
Jan - Feb 2025

11. Hofstede, G. (n.d.). *Culture's Consequences: Comparing Values, Behaviors, Institutions and Organizations Across Nations*. SAGE Publications
12. Esther-Mirjam, J, L. J., & Kroese. (n.d.). "Commemorating Geert Hofstede, a pioneer in the study of culture and institutions". *Journal of Institutional Economics.*, *18*, 15–27. https://doi.org/10.1017/S174413742000051X