NATURE AND GROWTH OF INDIA'S LEADING PHARMACEUTICAL INDUSTRIES

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Abstract

Pharmaceutical industries are vibrant and dynamic because who are they really contribute to the nation and people. In this study, main focus on India's leading pharmaceutical industries' (Sun Pharma Industry, Dr. Reddy's Laboratories, Cipla Pharma Industry, Aurobindo Pharma Industry, and Cadila Healthcare) income, investment, expenses, sales and export. India's leading pharmaceutical industries' growth of their income, investment, expenses and export have been analysed in this study post-globalisation. The study is covered period from 2001-02 to 2018-19. Certain statistical tool is used in the analysis of data growth rate. Income of Sun Pharma and Reddy's Laboratories was higher than that of the other three industries. Investment of Sun Pharma, Dr. Reddy's Laboratories, Cipla Pharma, Aurobindo Pharma, and Cadila Healthcare was higher and sustained their investment post-globalisation; these industries had tremendous growth in terms of their investment except Cipla Pharma. Export of Sun Pharma and Reddy's Laboratories' products were higher than those of the other three industries. It indicates that pharmaceutical industries have been grown faster in terms of export and income which lead to make more job opportunities and low price of medicine is possible to middle class and poor people.

Key Words: Growth rate, Pharmaceutical industries.

Introduction

India's leading pharmaceutical industries are playing major role in export of pharmaceutical products from India. This study's top focus is how much growth these India's leading pharmaceutical industries has contributed from 2001-02 to 2018-19. Pharmaceutical industries are vibrant and dynamic because who are they really contribute to the nation and people. In this study, main focus on India's leading pharmaceutical industries' (Sun Pharma Industry, Dr. Reddy's Laboratories, Cipla Pharma Industry, Aurobindo Pharma Industry, and Cadila Healthcare) income, investment, expenses, sales and export. India's leading pharmaceutical industries' growth of their income, investment, expenses and export have been analysed in this study post-globalisation.

Review of Literature

Eleanor J. Morgan (2001) in his article "Innovation and Merger Decisions in the Pharmaceutical Industry" studied that the significance of potential welfare benefits from innovation is important to give appropriate weight to the aspect of competition in merger analysis and attention must be given to the dynamic effects of mergers and ensure that innovation is not inhibited. This is particularly crucial in the pharmaceutical industry in view of the role of product innovation in the leading firm's strategies, the size of R&D (Research and development) expenditures, especially at the development stage, and the time it takes for pipeline products to reach the market.[1]

Pradeep Agrawal, and P. Saibaba, (2001) in their paper "TRIPS and India's Pharmaceuticals Industry", found that increased patent protection for inventors is necessary in the increasingly globalised world economy where flow of products among countries may have serious consequences for the overall profits of pharmaceutical firms. In the long run the Trade Related Aspects of Intellectual Property Rights agreement may bring benefits for developing countries like India in the form of research and development expenditure in inventing drugs for diseases that are specific to developing regions. In addition to this they also have given importance to generous tax incentives, minimum import duties, simplified export procedures and technological collaboration with foreign firms.[2]

Susan E. Feinberg and Sumit K. Majumdar (2001) in their study on "Technology Spillovers from Foreign Direct Investment in the Indian Pharmaceutical Industry" examine whether knowledge spillovers from MNCs'

local R&D activities benefit domestic firms in the Indian pharmaceutical industry from 1980-1994. They found that only significant R&D spillovers in the Indian pharmaceutical sector were between MNCs and each other.[3]

Lalitha (2002) in her article "Indian Pharmaceutical Industry in WTO Regime: A SWOT analysis". analysed and revealed an insignificant relationship between Patent Protection and location of R&D activity emerges. Her study emphasized that less focus on tropical diseases, dumping, slow pace of research in the field of biotechnology, delays in processing of the patent application, lack of understanding of various clauses under the TRIPs agreements among the industry members, lack of quality standards, high mergers and acquisitions etc. are the major problems of Indian Pharmaceutical industry. The study alsosuggested that Indian Pharmaceutical industry should adopt various strategies such as producing of patented products, new patented products by acquiring compulsory licensing, collaborate with multinationals not only in R&D and manufacturing but also in marketing new patented products and improving the standards of production to widen the export market.[4]

Chaudhuri (2005) in his book "The WTO and India's Pharmaceutical Industry: Patent Protection. TRIPs and Developing Countries" said that the technology gap between Indian and foreign firms was non-existent before the therapeutic revolution around 1940, it started increasing later when foreign firms began investing in R&D while the Indian firms concentrated on developing alternate processes for known drugs. He concludes that since the mid-1990s the Indian private sector has started investing in R&D for new drugs. A number of new chemical entities have also been developed which are at different stages of development, but none of the Indian companies is engaged in the entire process of drug development, because they do not yet, have all the skills and the funds required.[5]

Methodology

The study is purely based on the secondary data relating to nature and growth of India's top five pharmaceutical industries such as Sun Pharma, Dr. Reddy's Laboratories, Cipla Pharma, Aurobindo Pharma, and Cadila Healthcare and these industries' income, investment, expenses assets and capital. The study is covered period from 2001-02 to 2018-19. This study has focused on growth rate of India's top five pharmaceutical industries' performance over the period of the time.

Growth Rate of Income of India's Top Five Pharmaceutical Industries

Growth rate of Income of India's leading pharmaceutical industry is explained in table 1.

Table No: 1

Growth Rate of Income of India's Top Five Pharmaceutical Industries

Year	Sun pharma	Dr.Reddy's Laboratories	Cipla Pharma Growth	Aurobindo Pharma Growth	Cadila Healthcare Growth
2001-02	-	-	-	-	-
2002-03	22.20	5.27	31.49	9.97	-1.12
2003-04	15.04	8.39	11.97	1.07	79.24
2004-05	9.91	7.32	30.70	12.69	16.89
2005-06	29.90	19.96	18.75	10.21	10.56
2006-07	44.85	173.69	30.33	31.96	6.22
2007-08	31.47	-21.77	16.32	22.70	8.59
2008-09	37.99	-18.57	15.28	31.54	25.00
2009-10	23.40	7.63	22.77	8.58	11.77
2010-11	6.52	19.12	7.26	24.54	23.09
2011-12	41.20	0	12.41	0.10	20.64
2012-13	39.59	25.76	10.94	2.63	13.75
2013-14	37.65	25.71	18.32	26.76	10.06
2014-15	42.30	-11.60	20.66	31.80	16.68
2015-16	68.23	12.66	0.48	13.59	25.71
2016-17	3.23	8.05	21.28	16.52	31.07
2017-18	-71.23	11.73	-4.99	4.26	-15.83
2018-19	9.23	40.00	9.94	4.70	-0.05

Source: Computed Data from each Company's Annual Reports

Table No 1 shows the growth rate of income of India's top five pharmaceutical industries, such as Sun Pharma, Dr. Reddy's Laboratories, Cipla Pharma, Aurobindo Pharma, and Cadila Healthcare. The growth

rate of income in the Sun Pharma industry was 68.23 per cent in 2015-16, the highest in two decades. There was a negative per cent (-71.23) in 2017-18.The growth rate of income in the Reddy's Laboratories industry was 173.69 per cent in 2006-07, the highest in two decades. There was a negative per cent (-21.77) in 2007-08.The growth rate of income in the Cipla Pharma industry was 31.49 per cent in 2002–03, the highest in two decades. There was a negative per cent (-4.99) in 2017-18.The growth rate of income in the Aurobindo Pharma industry was 31.96 per cent in 2006-07, the highest in two decades. There was a low per cent (0.10) in 2011–12. The growth rate of income in the Cadila Healthcare industry was 79.24 per cent in 2003–2004, the highest rate in two decades. It was a low per cent (-15.83%) in 2017–18. It infers that in two decades, the income of Sun Pharma and Reddy's Laboratories was higher than that of the other three industries. After globalisation, these industries had tremendous growth in terms of their income, and almost every pharmaceutical industry has been increasing its income.

Growth Rate of Investment of India's Top Five Pharmaceutical Industries

Growth rate of investment of India's top five pharmaceutical industries is showed in table: 2

Table No: 2

Growth Rate of Investment of India's Top Five Pharmaceutical Industries

Year	Sun pharma	Dr. Reddy's Laboratories	Cipla Pharma Growth	Aurobindo Pharma Growth	Cadila Healthcare Growth
2001-02	-	-	-	-	-
2002-03	0.85	176.62	-35.53	-72.74	-42.06
2003-04	3.75	145.07	-11.96	2.93	-55.31
2004-05	106.19	156.70	42.52	-7.69	64.40
2005-06	100.62	19.55	1.10	1.61	-0.94
2006-07	83.11	-0.14	-87.16	15.14	35.30
2007-08	1.24	87.77	93.58	34.46	133.54

2008-09	15.15	12.82	44.37	22.98	-45.54
2009-10	145.96	1.80	-59.48	-6.42	11.00
2010-11	64.90	14.25	104.90	37.67	-38.09
2011-12	-13.39	-4.00	8.65	32.91	16.68
2012-13	-16.67	-42.07	72.37	10.18	52.26
2013-14	8.97	-6.62	120.64	14.30	3.61
2014-15	15.52	24.80	-79.01	19.61	14.76
2015-16	-2.50	54.62	99.57	-84.91	38.37
2016-17	-32.63	0.38	53.29	19.05	5.41
2017-18	129.07	20.23	0.69	42.13	27.09
2018-19	70.39	17.23	-28.39	16.97	54.25

Source: Computed Data from each Company's Annual Reports

Table No 2 shows the growth rate of investment in India's top five pharmaceutical industries, such as Sun Pharma, Dr. Reddy's Laboratories, Cipla Pharma, Aurobindo Pharma, and Cadila Healthcare. The growth rate of investment in the Sun Pharma industry was 145.96 per cent in 2009-10, and it was high in the past two decades. It had a negative growth rate, and it was -32.63 percent in 2016–17. The growth rate of investment in the Reddy's Laboratories industry was 176.62 per cent in 2002-03, and it was high in the past two decades. It had a negative growth rate in the year 2012-13 as well, which was -42.07 per cent. The growth rate of investment in the Cipla Pharma industry was 120.64 per cent in 2013–14, and it was high in the past two decades. It had a negative growth rate in 2006–07, which was -87.16 per cent. The growth rate of investment at Aurobindo Pharma was 42.13 per cent 2017-18, and it was high in the past two decades. And it had a negative growth rate in 2015-16 of -84.91. The growth rate of investment in Cadila Healthcare was 133.54 per cent in 2007-08, and it was high in the past two decades. It had a negative growth rate in 2003–2004, which was -55.31 per cent. It infers that in two decades, the investment of Sun Pharma, Dr. Reddy's Laboratories, Cipla Pharma, Aurobindo Pharma, and Cadila

Healthcare was higher and sustained their investment post-globalisation; these industries had tremendous growth in terms of their investment except Cipla Pharma.

Growth Rate of Expenses of India's Top Five Pharmaceutical Industries

Year	Sun pharma Growth	Dr. Reddy's Laboratories Growth	CiplaPharma Growth	Aurobindo Pharma Growth	Cadila Healthcare Growth
2001-02	-	-	-	-	-
2002-03	20.00	47.43	18.87	15.16	35.41
2003-04	8.50	0.81	16.44	4.08	82.94
2004-05	7.31	5.19	32.42	6.89	27.20
2005-06	21.54	33.71	17.19	18.71	-89.76
2006-07	49.21	107.57	6.16	21.63	14.56
2007-08	46.28	-14.61	-25.90	21.37	10.02
2008-09	7.70	-14.48	138.85	31.64	22.79
2009-10	33.08	2.53	-87.10	0.26	11.91
2010-11	-34.46	-5.67	1.56	26.44	14.86
2011-12	11.36	73.51	17.57	0.13	20.15
2012-13	26.24	-98.57	8.21	22.72	16.08
2013-14	-14.03	92.82	12.53	18.69	17.66
2014-15	46.21	-27.05	23.35	15.90	6.49
2015-16	33.82	18.78	10.35	9.81	17.62
2016-17	-4.77	5.99	12.03	18.34	16.58
2017-18	-10.37	39.90	6.82	5.09	16.33
2018-19	3.49	1.13	2.36	3.90	-16.54

Growth rate of expenses of India's five pharmaceutical industries is explained in table: 3

Table No: 3

Growth Rate of Expenses of India's Top Five Pharmaceutical Industries

Source: Computed Data from each Company's Annual Reports

Table No 3 shows the growth rate of expenses in India's top five pharmaceutical industries, such as Sun Pharma, Dr.Reddy's Laboratories, CiplaPharma, Aurobindo Pharma, and Cadila Healthcare. The growth rate of expenses in the Sun Pharma industry was 49.21 per cent in 2006–07, the highest in two decades. There was a negative per cent (-34.46) in 2010–11. The growth rate of expenses in the Reddy's Laboratories industry was 107.57 per cent in 2006-07, the highest in two decades. There was a negative per cent (-98.57) in 2012–13. The growth rate of expenses in the Cipla Pharma industry was 138.85 per cent in 2008-09, the highest rate in two decades. There was a negative per cent (-87.10) in 2009–10. The growth rate of expenses in the Aurobindo Pharma industry was 31.64 per cent in 2008-09, the highest in two decades. There was a low per cent (0.13) in 2011–12. The growth rate of expenses in the Cadila Healthcare industry was 82.94 per cent in 2003–2004, the highest rate in two decades. It was low per cent (-89.76) in 2005-06. It infers that in two decades, the expenses of Reddy's Laboratories and Cipla Pharma were higher than those of the other three industries. After globalisation, these industries had tremendous growth in terms of their expenses, and almost every pharmaceutical industry has been increasing its expenses.

Growth Rate of sales of India's Top Five Pharmaceutical Industries

Growth rate of sales of India's five pharmaceutical industries is expressed in table: 4

Table No: 4

Growth Rate of sales of India's Top Five Pharmaceutical Industries

Year	Sun pharma Growth	Dr. Reddy's Laboratories Growth	Cipla Pharma Growth	Aurobindo Pharma Growth	Cadila Healthcare Growth
2001-02	-	-	-	-	-
2002-03	21.76	6.70	507.65	14.70	75.95
2003-04	12.73	4.00	11.97	12.66	15.91
2004-05	15.82	10.62	30.70	-13.56	0.83
2005-06	2.41	1.08	18.75	27.01	16.25
2006-07	35.89	8.38	29.21	27.59	0
2007-08	27.28	82.67	17.33	18.96	8.80

2008-09	-14.27	-11.53	15.28	29.10	20.77
2009-10	30.97	29.96	22.52	15.05	1.06
2010-11	-6.49	19.37	8.46	27.42	6.76
2011-12	6.93	-0.67	7.25	-22.70	19.21
2012-13	20.51	27.33	11.66	11.77	11.08
2013-14	5.72	22.60	-18.26	2.61	21.23
2014-15	-100	17.57	-3.73	5.20	46.08
2015-16	0	0.09	-19.88	-13.23	9.49
2016-17	0	3.13	210.06	0.84	37.14
2017-18	8.53	0.34	5.82	0	-47.08
2018-19	-86	39.10	-11.38	31.28	61.67

Source: Computed Data from each Company's Annual Reports

Table No 4 shows the growth rate of sales in India's top five pharmaceutical industries, such as Sun Pharma, Dr. Reddy's Laboratories, Cipla Pharma, Aurobindo Pharma, and Cadila Healthcare. The growth rate of sales in the Sun Pharma industry was 35.89 per cent in 2006-07, and it was high in the past two decades. It had a negative growth rate, and it was -100 per cent in 2014–15. The growth rate of sales in the Dr. Reddy's Laboratories industry was 82.67 per cent in 2007-08, and it was the highest in two decades. It had a negative growth rate in the year 2008–09 as well, at -11.53 per cent. The growth rate of sales in the Cipla Pharma industry was 507.65 per cent in 2002-03, and it was high in the past two decades. It had a negative growth rate in 2015-16, which was -19.88 per cent. The growth rate of sales at Aurobindo Pharma was 31.28 per cent in 2018–19, and it was the highest in two decades. And it had a negative growth rate in 2011-12 was -22.70. The growth rate of sales at Cadila Healthcare was 75.95 per cent in 2002-03, and it was high in the past two decades. It had a negative growth rate in 2017-18, which was -47.08 per cent. It infers that in two decades, sales of Sun Pharma, Dr.Reddy's Laboratories, Cipla Pharma, Aurobindo Pharma, and Cadila Healthcare were higher and sustained their sales post-globalisation; these industries had tremendous growth in terms of their sales except Cipla Pharma.

Growth Rate of Export of India's Top Five Pharmaceutical Industries

Growth rate of export of India's top five pharmaceutical industries is explained in table: 5

Table No: 5

Growth Rate of Export of India's Top Five Pharmaceutical Industries

Year	Sun pharma Growth	Dr. Reddy's Laboratories Growth	Cipla Pharma Growth	Aurobindo Pharma Growth	Cadila Healthcare Growth
2001-02	-	-	-	-	-
2002-03	15.49	38.88	51.28	-75.94	29.43
2003-04	90.90	-58.79	27.96	13.89	62.27
2004-05	48.38	310.20	437.30	-13.61	23.19
2005-06	30.09	-20.37	-49.30	47.18	86.16
2006-07	38.41	-24.97	-81.03	-57.71	-46.42
2007-08	39.20	-61.95	511.96	288.03	35.03
2008-09	45.97	90.00	-40.72	30.39	44.97
2009-10	9.34	20.84	116.75	19.44	19.66
2010-11	-28.44	6.32	5.76	29.26	-20.48
2011-12	-100	21.83	18.10	8.41	-20.66
2012-13	0	-36.12	0.78	33.16	96.68
2013-14	0	160.10	25.17	8.74	13.80
2014-15	18.06	21.40	0	-19.19	-98.20
2015-16	0	15.35	9.60	107.30	-7.58
2016-17	0	-24.07	4.45	22.31	1.17
2017-18	6.84	18.00	9.80	-60.18	242.85
2018-19	0	-14.52	0	133.56	-12.61

Source: Computed Data from each Company's Annual Reports

Table No 5 shows the growth rate of exports of India's top five pharmaceutical industries, such as Sun Pharma, Dr.Reddy's Laboratories, Cipla Pharma, Aurobindo Pharma, and Cadila Healthcare. The growth rate of exports of the Sun Pharma industry was 90.90 per cent in 2003–2004, and it was the highest in two decades. There was a negative per cent (-100) in 2011–12. The growth rate of exports in the Reddy's Laboratories industry was 310.20 per cent in 2004–05, the highest in two decades. There was a negative per cent (-58.79) in 2003- 04.The

growth rate of exports of the Cipla Pharma industry was 511.96 per cent in 2007–2008, the highest rate in two decades. There was a negative per cent (-81.03) in 2006-07. The growth rate of exports of the Aurobindo Pharma industry was 288.03 per cent in 2007–2008, the highest in two decades. There was a low per cent (-75.94) in 2002–03. The growth rate of exports of the Cadila Healthcare industry was 242.85 per cent in 2017–18, and it was the highest in two decades. It was low per cent (-46.42) in 2006-07. It infers that in two decades, the exports of Sun Pharma and Reddy's Laboratories were higher than those of the other three industries. After globalisation, these industries had tremendous growth in terms of their exports, and almost every pharmaceutical industry has been increasing its exports.

Conclusion

India's pharmaceutical industry has been growing faster in the post-globalisation era. India's leading pharmaceutical industries' income, investment, expenses, sales and export has increased over the period of post-globalisation. It indicates that pharmaceutical industries have been grown faster in terms of export and income which lead to make more job opportunities and low price of medicine is possible to middle class and poor people. Therefore, if the government increases its support towards pharmaceutical industries such as tariff reduction on import of raw materials from foreign countries and sale tax on medicine or drugs it led to consumer can get it to low price and sales will increase and volume of production will increase. This is a cyclical process and so the government has vital role on this process of production of pharmaceutical products.

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