CHAPTER – IV
SOFTWARE INDUSTRY IN TAMILNADU – A PROFILE

Software industry is one of the most popular and fast growing industries in countries all over the world. Its growth trajectory is so spectacular that it is second to none in posting astonishing rates of growth in employment generation, income generation and in technology promotion. No wonder, it is treated for all practical purposes as a catalyst in ushering in, an era of changes of far-reaching significance in the socio-economic and political environment of people in countries rich and poor. An attempt is made in this chapter to provide a bird’s eye view of the trailblazing achievements of certain global players in the software industry chosen for the present study.

4.1 WIPRO

As it is well-known Wipro has been enjoying the unique distinction of being treated as the second largest software services company in India since 2012. As it was found out in June 2011, it had in its employ 72,000\(^1\) technical personnel of various categories in countries across the world. It provides outsource research and development, infrastructure outsourcing, business process outsourcing and business consulting services. The three most popular and much touted segments of the company are SW services, SW products,

consumer care and lighting. What is unique about the company is that it was established in 1945\(^2\) by Mohamed Hasham Premji as Western India Vegetable Products Limited. Now it is known for short as WIPRO. It had a humble origin, manufacturing vegetable oil, sunflower vanaspathi oil and soaps in Amalner and Maharastra. That is precisely the reason why its logo still contains a sunflower. During the 1970s and 1980s the company shifted its focus and began to look into business opportunities in the SW and computing industry, which was in its infancy in those days. It is important to observe here that WIPRO started marketing in India, the first indigenous homemade personal computer. In the year 2000 the company entered a new saga of strident growth and emerged as the largest publically listed software exporters in India and the first services provided to be assessed at SEI level 5 in the world. In the year 2001, its effective service delivery using state-of-art then technology won universal recognition and became the proud winner of the Golden Peacock Innovative Services award. During the years from 2001 to 2006, the company was in a winning spree. The following awards have boosted up the image of the company in the international circles. “WIPRO was awarded SVGI, the highest rating in Stakeholder Value Creation and Governance Practices by ICRA, a premier credit rating agency in India and an associate of Moody’s Investor Services of USA”.\(^3\)

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“WIPRO was awarded the Indian Manufacturing Excellence Award for its factory in Pondicherry in the large enterprises category by Frost & Sullivan”.

“WIPRO was awarded the ASTD BEST Awards for 2005 by the American Society of Training and Development”.

“WIPRO’s Global Command Centre won the Marico Foundation and Business World’s Innovation for India Award in 2006. The conglomerate was rated as the No.1 Network Integrator and No.1 Network Security Services Provider by Voice & Data Magazine.

As it could be observed from the aforesaid achievements of WIPRO, the company which is purely India based, has emerged as a major global player by making a dent in the fields of consumer care and lighting, infrastructure engineering and GE medical systems. The headway made by this company in this area is so spectacular and breathtaking that they have been captioned as the WIPRO divisions. Another significant aspect of the company which is worth remembering is that it has made its presence felt in the field of business process outsourcing as well. What is unique about this field of service is that the majority of WIPRO BPO’s business comes from the US followed by Europe. The company employs over 75,000 in Oct. 2007 personnel in business process outsourcing. The group of companies which have emerged as major global players under the banner of WIPRO Limited would include

1. WIPRO Consumer Care and Lighting which has a profitable presence in the brand retread market of toilet soaps, hair care soaps, baby care products and lighting products.

2. WIPRO Infrastructure Engineering which is known for its manufactures such as precision–engineered hydraulic cylinders and truck hydraulic cylinders and truck hydraulic solutions for the infrastructure and related industries. It is pertinent to add here that it has been acclaimed as the second largest independent hydraulic cylinder manufacturer in the world.

3. WIPRO GE Medical Systems Limited, whose exceptional character is that it is a joint venture between WIPRO Limited an the General Electric basically delivering what it calls “quality solutions that effectively meet the needs of customers and patients”.

As it has been alluded to earlier, Chennai has emerged as one of the major and distinguished hubs of SW related activities. WIPRO Limited has established its SW Empire in places like Guindy and Solinganallur. The growth of WIPRO in revenue size in the recent past has been quite significant and impressive. In 2013-14, it had a total revenue of Rs. 437628 million. It increased to Rs. 473182 million in 2014-15 Rs. 516307 million in 2015-2016, Rs. 534179 million in 2016-2017 and Rs. 546559 million in 2017-2018.6

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Similarly its profit levels have also registered encouraging signs of growth. It was found to be of the order of Rs. 77967 million in 2013-14. It was ramped up to Rs. 86528 million in 2014-15; Rs. 89075 million in 2015-16, and Rs. 84895 million in 2016-17. However, its profit level suffered a minor hit and stood at Rs. 80081 million, in the financial year 2017-2018. This unexpected dip in profit level has been attributed to the fierce competition reging in the SW world. This is a global phenomenon which is sought to be overcome soon.

4.2 Cognizant

Cognizant is another software company which has gained global eminence by its immense and trail blazing contributions. It is widely known as an outstanding multinational provider of customary information technology and consulting business process outsourcing services. It has established itself firmly in a number of countries. However, it has its base of operation in Teaneck, New Jercym, United States.

As it is very well known, the company owes its origin to the joint efforts of the India based business colossus like Dun and Bradsheet and Satyam Systems. It was started in 1994. The company was listed and NASDAQ in 1998. It moved to the NSDAQ – 100 Index in 2004. The growth of the

company during the years between 2004 and 2011 was quite phenomenal. In June 2011 the company was found to be financially very sound with as huge an amount as $2.2 billion in cash.\textsuperscript{10} It was reported that a major portion of its revenue was derived out of clients from U.S.

The services provided by Cognizant covers quite a number of areas.\textsuperscript{11} They include

a) business and technology consulting

b) business process out sourcing services

c) SW infrastructure services

d) Web analytics

e) Business Intelligence

f) Data were housing

g) Supply clean Management

h) Engineering and manufacturing solutions.

i) ERP, R & D out sourcing and Testing Solutions

Cognizant is among the top 10 companies in India receiving LI vises to bring highly skilled immigrant workers to the United States. The point which deserves a special mention in this context is that a vast majority of its professionals in the United States and in Europe are Indian Nationals.

\textsuperscript{10} Cognizant (CTSH) Financial (http: 11 \textcolor{blue}{www.google.com}) finance q-NASDAQ, CTSH & fstype.

\textsuperscript{11} Cognizant Annual Report 2016.
Cognizant has more than 137,700 employees globally, of which over 100,000 are in India across 10 locations with a major chunk in Chennai. The other centers of the company are in Coimbatore, Hyderabad, Pune, Bangalore, Mumbai, Kochi and Mangalore. Further, the company has established its delivery centers in the UK, Europe China, Philippines, Canada, Argentina and Mexico.

The role played by the Cognizant in the software field has been commendable. As a result, it has registered impressive growth in its financial strength. This growth has come as a surprise to many top Indian companies like, the Tata Consultancy Services, Infosys, and WIPRO. In the March quarter of 2017, its total revenue was found to be of the order of $ 5.5 billion. It was 11 percent higher than the revenue it had obtained during the previous financial year. This spectacular achievement of the company was attributed to its strong performance in business consulting and digital solutions. Another creditable achievement of COGNIZANT during the March quarter of 2017 was that its profits showed a 26 percent hike and stood at $ 557 million. Compared to the previous year. Profit level of $ 441 million it could be appreciated as a giant leap. Thus, the performance of the company up to March 2017 has been highly laudable and impressive. In Chennai the achievements of the company has been much more than any of its peers.

13. Ibid.
15. Cognizant Reports First Quarter 2018.
16. Ibid.
4.3 Tata Consulting Services (TCS)

The Tata Consultancy Services Limited is one of the foremost information technology consulting services business process outsourcing services organization and engineering service organizations of India which has won universal accolades for its evergrowing technology driven and faultless streaming from 55 bases of its operation representing 55 countries which have carved out a place for themselves within the field of science and technology across the globe. Its services and products in SW consulting and business process outsourcing are unique in every respect. Its innovation labs and academic alliances have been solely responsible for its success in keeping its clients operating at the very edge of technological possibility. The aims of Tata Consulting Services Limited have been to develop numerous initiatives which will have a scintillating transformational impact on society and individuals. The planning process which is involved in TCS is busted by its impeccable systems of strategy development and strategy deployment.

TCS has identified the following major service offerings for achieving its growth aspirations:

i) SW Solutions and Services: TCS offers application development and maintenance services over the entire SW application lifecycle, including migration and reengineering, e-commerce and internet services, testing services, architecture and technology consulting,
systems integration, as well as packaged software implementation across multiple industry and technology domains.\(^{17}\)

ii) Asset-based SW Services: TCS utilizes its proprietary software assets to deliver solutions to clients in specific industries and has licensed several software intellectual property rights. TCS also develops and markets a variety of products across diverse industries. It has developed products such as the Hospital Management System, EIBS, NCS, FIG and Quarts for the banking and financial services industry, software development tools such as Master Craft\(^{TM}\), Assent, Data Clean and Infrax.\(^{18}\)

iii) Engineering and Industrial Services: TCS offers a range of engineering services, embedded software and R & D services to diverse clients, assisting in new product development and product lifecycle management through services in the areas of product design, simulation, engineering drafting, computer-aided engineering design and manufacturing, product data management and customization of engineering software.

iv) Software Infrastructure Services: The Company offers services that include complete outsourcing of SW networks, consulting and integration, hardware support and installation and infrastructure management.

\(^{17}\) Lee K., & Park, T.Y. (2010). Catching up or leapfrogging in Indian IT service sector: Windows of opportunity, path creating and moving up the value chain in TCS, Infosys, and Wipro, In Asiatic Conference.

v) Business Process Outsourcing: TCS offers a variety of transaction-based SW enabled services. These include inbound call centers, back office support, engineering services and database services. TCS’s focus in this space is to provide transactional services 24x7 for client needs from various geographies; thereby, ensuring business continuity and disaster recovery.19

vi) Global Consulting Services: One of the first companies to set up an independent consulting division, TCS today includes consulting as an integral part of any assignment to its customers in different industrial segments”.20

4.3.1 Economic Strategy and Management Approach

Strategy of TCS is based on three important schemes. They are

1. Global Network Delivery Model

2. Strategy Acquisitions and

3. Integrated Full Services Play

Global Network Delivery Model

The Global Network Delivery Model (GNDM) is a truly global network.21 GNDM is much more than having an India-centric delivery model with near shore centers and is not about setting up Offshore Development

Centers (ODC) in different geographies. The GNDM enables its delivery centers to collaborate on projects, leverage all its assets, work on a ‘follow-the-sun model’ if necessary, and above all, through their homogeneity in terms of quality, skills as well as look-and-feel, give customers the same experience of certainty, irrespective of whether they work with it in Chennai, China or Chile. The company became the first organization in the world to be certified enterprise wise for ISO 9001-2000, ISO 27001:2005 and ISO 20000:2005 in January 2007. Its customers can continue to experience the certainty of “high quality of service delivery”, as it stays focused on continuous improvement of security, quality and processes in an industry where technology changes occur frequently.\textsuperscript{22}

\subsection*{4.3.2 Strategic Acquisitions}

A key driver for growth has been the company’s strategic acquisitions for creating new capabilities that would drive higher levels of synergistic growth. The value generated by these acquisitions has been significant and so far, it has seen only the beginning of synergistic revenue opportunities. It believes that many of the acquisitions it has made in the last couple of years have become force multipliers for the company in terms of both revenue growth and improved capabilities. Many of the large value deals, the company has been able to win, can be attributed to these acquisitions.

\textsuperscript{22} Forbath, T., & Brooks, P. (2007), Global service providers outsourcing’s next wave: going beyond outsourcing to merely lower costs, today’s leading companies are using “global sourcing” to drive new forms of revenue and create top line growth. What value are they obtaining, and how are they doing it? Financial Executive, 23(3), pp. 21-25.
4.3.3 Integrated Full Services Play

TCS is increasing its focus on expanding the breadth of its service offerings and capabilities to become a one-stop service provider. The power of the GNMD as well as its strategic acquisitions is illustrated through its “integrated full services play” that now captures the entire value chain of software from consulting to products and solutions and from implementation to support. One recent example of all its services at work as part of an “Integrated Full Services Play” is the $140m banking/financial services deal from Bank of Pichincha in Ecuador. This deal uses FNS/BANCS, the core banking engine from TCS. In this deal, TCS is offering the bank software Services, Infrastructure Services and BPO – all using the GNMD. The Bank of Pichincha depends on TCS’s FNS centre in Sydney and India Development centers for any product customization. It depends on TCS’s Santiago centre for BPO best practices and process management. Any other custom development is done at TCS’s centre in Uruguay. TCS’s process capabilities and range of services provide a compelling value proposition for its existing customers with over 96.8% of its business this year coming from repeat customers. Moreover, these offerings are also witnessing traction among more than the 100 new customers added during the year and give the company significant opportunities to sell different solutions to customers.24

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4.3.4 TCS and its thirst for Environmental Protection

The strategies of the TCS are basically intended to accelerate the pace of its growth in the fields of world’s leading information technology, consulting services, business processing outsourcing and engineering services organizations. Even in the midst of the hectic agenda tailored to reach targets in these areas, it has never lost sight of its interests in environmental protection which has been assigned a place of paramount significance by the government of India in the largest interests of people all over the country. The commitment of TCS to the environment stems from the abiding concern of the TATA Group of companies for environment and society. This is basically the reason why TCS has been striving indefatigably to provide a healthy environment to all its employees and conduct environmental business at all its offices through its research labs. It has evolved technology driven, fool proof systems to bring about ecological balance by minimizing waste generation from business operations and by recycling obsolete SW hardware. Its policies are focused on environment conservation which could be treated as an essential element of its business philosophy and infrastructure. In short, TCS stands committed to reducing the environmental impact on its operations through the appropriate ongoing material management.  

The contribution of TCS towards the evolution of policies and practices of scientifically prone systems of drinking water management has been unique in every sense of the term. To put it in a nutshell, TCS manages water reuse and waste water treatment through sewage treatment plants. As it is well-known the nature of TCS’s operations is such that they are quite environment friendly.

In handling industrial waste also TCS stands head and shoulder above any other company across the globe. The processes used are environment friendly and cost efficient. To avoid radiation pollution in handling E-waste, it has embarked on a policy of feeding all obsolete computers in TCS to E-waster blenders for recycling. In Hungary obsolete computers are returned to the suppliers who then dispose them off appropriately. In India all obsolete cartages and batteries are sent to venders, authorized by the pollution control of India. Similarly, base lube oil is also sent to authorized vendors for purpose of disposal. Similarly paper wastages and domestic sewage have also been subjected to a scientifically proven recycling process. On top of all these, the TCS has put in place facilities for video conferencing to get in touch with clients both within the country and abroad. The idea behind the system is too much of vehicular travel by staff and clients will lead to the growth of green house emissions resulting ultimately in the depletion of ozone layer.  

4.3.5 Workforce Diversity

TCS’s greatest asset is its workforce. During 2006-07, the company made substantial addition to human resources. The company had a gross addition of 32,462 (previous year 27,377) employees and a net addition of 22750 (previous year 21140) employees primarily through recruitment and mergers and acquisitions in FY 2006-07. The total number of employees in the company as on March 31, 2007 was 85582 (62832 as on March 31, 2005) employees. Even though 59% (43890 people) of the net average headcount during the year have been recruited in the last two years, the average work experience of 48% of the workforce is more than 3 years, showing the success the company has been attracting and retaining talent. The employees are not unionized except for 72 staff members who comprise less than 0.1% of the total workforce.

Women constituted 26% (previous year 24%) of the workforce on March 31, 2007. The company employed people from 67 (previous year 53) different nationalities in its workforce. Non-Indian nations aggregated 9.6% (previous year 6.5%Z) of the total workforce as on March 31, 2007. Being an equal opportunity employer, TCS does not discriminate between men and women. In every employee category, irrespective of seniority, the basic salary is the same for both genders. The attrition rate of 11.3% (previous year 9.9%) in FY 2006-07 is one of the lowest in the industry. The second level analysis of attrition rate over the last 12 months shows that the software attrition rate
was 10.6% and the BPO attrition rate was 20.2%. This low attrition rate has been achieved by continuously investing in learning and development programs for employees, competitive compensation, creating a compelling work environment, empowering employees at all levels as well as a structured reward and recognition mechanism.27

4.3.6 Benefits – Employment and Retirement

Welfare benefits for full-time employees, include subsidized housing and other loans, medical facilities, retirement benefits, transportation, canteen facilities, overseas allowances, family events (picnic, treks, cultural events), on premise bank extension counters/ATMs, Helpdesk facilities, flexible working hours, assistance in school admissions, holiday homes, magazine subscriptions, Tata welfare fund, overseas travel reimbursement for paper presentations and maternity leave for adoption. TCS also provides retirement benefits to all its full time employees:28

Provident Fund (on which loans are permitted)

Gratuity: An employee will be eligible for payment of gratuity either as per the payment of Gratuity Act, 1972, or as per the company gratuity scheme, whichever is higher, at the time of resignation/retirement.

Superannuation Fund

Paid vacations before retirement: All the employees of TCS India who

have served TCS or any of its group companies for a period of 20 years and above, and who are due to retire from service in 3 months or less are entitled to a fully paid vacation (including air transport, lodging, food and actual) at a company guest house of their choice.

Entitlement to continue on medical insurance scheme.

Long service recognition: TCS employees receive rewards and recognition after pre-defined periods of service.

4.3.7 Training Education and Development

New recruits undergo a six-week Initial Learning Programme (ILP) at either the L & D facility in India or at facilities provided in other countries, catering for overseas recruitment. Initial training as part of the ILP covers corporate values, principles and business behaviour.\(^{29}\) As part of this training, all employees must sign the TCoC to indicate their awareness of its principles and the expectations set.

What follows the ILP is the Continuous Learning Programme (CLP) which updates the employees’ training, as they progress through the organization. The CLP addresses technology and domain type training plus management and leadership development programmes and diversity management programmes. There is also a Leadership Development Programme (LDP) which has several modules, intended for leadership development.

\(^{29}\) Ibid.
The company tries to achieve the strategic learning objectives through the deployment of action plans. It provides an integrated mechanism for employees to capture their individual skill levels, aspirations and ongoing training needs. Further, the translates them into individual learning plans; while tracking learning delivery and assessing competencies. Technical and managerial training needs aligned with current roles and career aspirations are captured during performance reviews and through CALMS on an ongoing basis.\textsuperscript{30}

The Learning and Development (L&D) group addresses the learning needs of all employees, including managerial and leadership development programs. Topics such as diversity, ethical business practices, workplace safety and security are covered during organizational induction training on an ongoing basis. ISO 14000 and ISO 27001 awareness and fire drill training help employees to ensure their own safety and that of their workplace environment.

\textbf{Managerial Skills \& Leadership Development Effort}

<table>
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<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
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<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
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<th>Q2</th>
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<td>Generic Managerial Skills</td>
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<td>Continual Learning for Business Advisor Skills</td>
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<td>30</td>
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<td>1957</td>
<td>1083</td>
<td>2643</td>
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<td>257</td>
<td>245</td>
<td>2539</td>
<td>3896</td>
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<td>5126</td>
<td>6852</td>
<td>7832</td>
<td>10439</td>
<td>10568</td>
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</tbody>
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\textit{Source: Brand Finance for TCS Growth}

\textsuperscript{30} TCS with US based Eli Lilly for advanced clinical research \url{www.oneindia.com}, 2006-11-15
Retrieved 2\textsuperscript{nd} July 2016.
4.3.8 Learning and Development – Trivandrum

TCS recognizes that investing in its people, is a key to the sustainability of its delivery model by generating employee satisfaction and minimizing the attrition rate. One aspect of this is the culture of learning throughout an employee’s development lifecycle and TCS invests around 6% of its profits in L & D. The L & D centre, at Trivandrum, India was established in 1998 to deliver its training requirements. It has 18 classrooms, a library and auditorium, a conference hall, discussion rooms and about 300 personal computers connected to servers.

All full time employees of TCS, including all support groups, receive half yearly career development reviews. All new employees, in the first year of their employment, receive quarterly reviews. At the end of every assignment, employees may also receive formal project end reviews. On its extranet portal, Ultimatix, there is a section devoted to education and training of employees on healthcare. Every month, this section covers topics such as fitness, diet-related nutrition facts, stress-related articles and the like.

In the event of outbreak of an epidemic, in India or overseas, Ultimatix is the chosen mode of communication to disseminate knowledge and dispel myths (eg. During the SARS and bird flue outbreaks in Asia); email is also used as a communication medium to send dos and don’ts messages. Workshops are also conducted to disseminate information. In 2007, Maitree started the ‘HIV/AIDS Sensitization Drive’ in different Mumbai branches.31

Thus, TCS has been accepted on all hands as one of the very fast growing SW brand during the last five years. SW is evident from the fact that its brand value has gone up from $2.3 billion in 2010 to $8.7 billion in 2015. In recognition of its phenomenal growth and brand reputation, it has been rated at the AA+ level. The growth of its brand value is enshrined in the following table.

### 4.3.9 Growth of the brand value of TCS from 2010 to 2015

<table>
<thead>
<tr>
<th>Year</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>PC increase</th>
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<tr>
<td>Brand value in million</td>
<td>2344</td>
<td>3716</td>
<td>4068</td>
<td>5247</td>
<td>8284</td>
<td>8694</td>
<td>121%</td>
</tr>
</tbody>
</table>

*Source: Brand finance for TCS Growth*

In 2016 TCS was acclaimed as the biggest wealth creator. The total wealth created by TCS during the years between 2011 and 2016 was estimated at, as huge an amount as Rs. 2.6 lakh crores.\(^{32}\)

### 4.4 INFOSYS

Infosys Limited is a very prominent global technology Services Company. It was originally known as Infosys Technology Limited. It has its base of operation in around thirty countries. All of them provide business consulting, technology, engineering and outsourcing services. Its business solutions are characterized as “end to end” business solutions, leveraging technology for its clients. Among the wide range of services delivered, the most important ones which deserve a special mention would include business

\(^{32}\) Ibid.
and technological consulting, custom application development, infrastructure management service, maintenance and production support, package enabled consulting implementation including enterprise solution, product engineering and life cycle solutions, systems integration, validation solutions and cloud-based solutions and services. The company enjoys a premier position in the banking industry as a provider of software products. The company’s business process outsourcing covers areas such as business process management services, like offsite customer relationship management, finance, accounting, administration and sales order process. It has been acclaimed as a reliable advisor and a matchless strategic partner the world over.

Though the company had a humble beginning in the year 1981, with a capital investment of just $250, its growth trajectory has been trail blazing, to any prospective investor in the field of information technology.\(^ {33} \) It has on its staff 46000 employees in over 40 locations across the world. Though it has distinguished itself as a key player in knowledge industry, it has given due recognition to the importance of human assets in maintaining and increasing its strategic competitiveness. As its founder has acknowledged in unequivocal terms, empowerment of human assets and a fair treatment of them under all circumstances, would in the long run, help the company succeed in its attempt of getting the best out of them. Its major focus has been on intellectual property

\(^ {33} \) Investor Frequently asked questions (FAQs) infosys.com. 31\(^ {st} \) March 2018 retrievals 18\(^ {th} \) July 2018.
as it is pioneering in the most challenging knowledge industry. The outcome of
this unique policy is that its employees have been working towards creating
more value for the company, which in turn means more value for themselves.
What is generally said about the staff in Infosys is that they always surrender
their ego and personal interest to the company, as the company means every
thing to them.

Infosys, as it could be inferred from its annual reports, has set standards
in the business transaction, which have been ethical, sincere and open. The
secret behind its excellence is that it has been striving relentlessly to improve
itself, its team, its services and products in all the 63 countries where it has
established its foot prints as a major global player. 34 Another very significant
factor which deserves special attention is that Infosys is the first company to
successfully provide computing services from India to clients around the world
at very competitive cost. With the efflux of time the company has started
handling a wide range of SW contracts from software development to system
maintenance for many of the leading corporations in Europe and America. It
has also been providing back of its support to many more extending from order
processing and customer supporting call centers.

Infosys has on its staff an ever growing army of low cost but highly
educated and outstanding engineers. The only lure for the creamy layer of all

the engineering graduates is the high salaries and glitzy perks offered by Infosys. The quality of their services is so superb that the company is able to provide its clients with cost effective and remarkable efficient engineering services all over the world.

Unlike any other company in the world, Infosys has been a trail blazer and pace setter. It could be seen from the alacrity with which it has migrated from support service to value creating software development. Its offices in China and Mexico have come as a sequel to the simmering threats of wage inflation and skill shortages which it has started facing in India. Efforts are on to acquire very large and well-established European firms to render its future global growth ambitions pragmatic.

What is unique about Infosys is that it has chalked out a risk management strategy. This initiative has enabled it to hold its ground and forge ahead, even during the grim, searing rigors of the global dot com winter. In fact Infosys has over the years systematically built up post modern scaleable enterprises for harnessing intellectual capital in the global economy that thrives on information and knowledge. Further, it has been continuously creating and replenishing its knowledge capital, as a prelude to role out an impressive array of methodologies and frameworks that guide these business operations including the Global Delivery Model.35

As it is well-known the Global Delivery Model plays a remarkable significant role in ensuring the profitability of the company. This model has entailed the shifting of a major portion of the project execution from costly onsite client locations to off short locations in India. On top of all these, this model has contributed a systematic reduction of the costs of operation and in leveraging a time difference between India and its major markers in USA and Europe. The secret behind the breathtaking success of all the business ventures of Infosys is that it has institutionalized performance and accountability in its systems and processes.

The challenges faced by the company as it grows in size, scale, complexity and foot prints are known for their multiplicity and ferocity. But in spite of all these, Infosys is focusing it efforts on its lofty goal of emerging as a globally acclaimed technology consultant capable of proactively developing business solutions to meet the challenges of customers from any where. What is very significant to bear in mind is that every one in the company is geared towards formidable goal.

Infosys has posted significant growth values during the last five years. Its total income stood at Rs. 4697 crores in 2014. It increased to Rs. 50637 crores in 2015, Rs. 56989 crores in 2017, Rs. 62351 crores in 2017 and Rs. 6560 crores in March 2018. Similarly its profits which was found to be of the order of Rs. 10194.00 crores in March 2014, increased to Rs. 11752.00 crores in March 2015, Rs. 12693.00 crores in March 2016, Rs. 13818.00 crores in
March 2017 and Rs. 16155.00 crores in March 2018.\textsuperscript{36} Thus the growth registered by the Infosys over the years has been quite amazing.

4.5 HINDUSTAN COMPUTERS LIMITED (HCL)

Hindustan Computers Limited is a global technology and SW enterprise which has sprawled over 39 countries around the globe. It is a company which has the unique distinction of being comprised of HCL technologies and HCL info systems. India is genuinely proud of its distinct contribution because it has established its contacts all over world from its base of operation, in Noida, near New Delhi established in the year 1976, by one of its eminent sons, Shiv Nadar. During the last 36 years it has delivered matchless growth by scaling up the total value of its assets to 6.2 billion dollars in 2001 and the total number of its employees to a whopping 90000. Its recent report shows that it has, by far, the largest software development infrastructure. Numerically speaking, it has seven software factories. The state-of-the-art technology used in these factories has enabled it to enjoy, copiously and variously, the advantages of high productivity and scalability as well as the relatively lower cost of software development.\textsuperscript{37}

The secret behind the marvelous rates of growth witnessed by the HCL lies in the fact that it has very great concern for its employees. Its attitude towards them has been positive, proactive, humane and gentlemanly.

\textsuperscript{36} The Amazing Story of the birth of HCL, Archived from the original on 27\textsuperscript{th} March 2018.
\textsuperscript{37} Ibid.
HCL Technologies believes that healthy employees miss fewer days of work, increases productivity and reduces health care costs. Wellness programme is seen as an added benefit that encourages employees to stay and work with efficiency.

Work related stress is a major concern for the organization. Rather than incurring ever increasing expenses towards healthcare, and treating diseases only after they develop, HCL Technologies believes in creating healthy workspace for employees. They focus their resource and energy on preventing and/or reversing chronic diseases through engaging, targeted employees health and wellness programs which motivate employees to change their lifestyles. Wellness of employees is seen as a prime corporate responsibility. The company’s Wellness Council is a platform to channelise the energies of employees into more profitable avenues by trying to rein in their stress levels.

Keeping the “Employees First” philosophy in mind, HCL has introduced MITR… an Employee Assistance Program that would assist HCL employees and their immediate family members with comprehensive information, personal development and counselling services which is available 24 x 7,365 days in a year. MITR is just a phone call away for all the employees to provide independent support, information and advice that’s completely free and confidential. HCL has tied up with PPC a leading worldwide EAP Service Provider. PPC UK Ltd is a global service provider of employee assistance program and a member of EAPA. PPC worldwide draws on over 30 years’
experience of delivering employees assistance services to a wide range of organizations across the globe. PPC has its operations in the UK, USA, Canada, India, South Africa, China, Mexico etc. PPC covers 140 countries through its network of affiliates. MTTR has been customized to make it convenient as per employee needs.\textsuperscript{38}

HCL is a $5 billion leading Global Technology and SW Enterprises that comprises two companies – HCL Technologies \& HCL Info systems.\textsuperscript{39} The 3-decade-old Enterprise, founded in 1976, is one of the India’s original SW garage start ups. Its range of offerings, spans product engineering, custom \& package applications, BPO, SW Infrastructure services, SW hardware, systems integration and distribution of ICT products. The HCL team comprises over 59000 professionals of diverse nationalities, who operate from 20 countries including 360 points of presence in India. HCL has global partnerships with several leading fortune 1000 firms, including leading SW and Technology firms.\textsuperscript{40}

HCL Technologies Ltd., - Business Services is the global business process outsourcing arm of HCL Technologies Ltd. HCL is a 34 year old enterprise, with USD 5.5 billion revenue and 77000 professionals operating in 29 countries.\textsuperscript{41}

\textsuperscript{38} HCL enters health care business with 1000 crore. The Times of India February 2014, Archived from the original on July 2015, Retrieved 28 August 2015.
\textsuperscript{39} HCL launches Talent care to bridge supply gap in Health care Banking. The Economic Times 15\textsuperscript{th} May 2015 Retrieved August 29, 2015.
\textsuperscript{40} Ibid.
\textsuperscript{41} Heritage Legacy HCL Archived from the original on August 20, 2015, Retrieved 28\textsuperscript{th} August 2015.
HCL Technologies Ltd., - Business Services established in 2001 is one of the early players of Business Process Outsourcing. With, over $200 million (as on 30\textsuperscript{th} June 2010) in revenue, HCL Business Service has over 11,500 employees across 26 global, integrated delivery centers providing over 220 domain specific and quality driven processes to several Fortune 500/Fortune Global 500 customers.\textsuperscript{42} HCL Business Services’ focus verticals include Telecom, Retail, Media, Publishing & Entertainment, Energy, Utility & Public Services, banking & financial services, insurance, healthcare and Hi-Tech and manufacturing. This apart, the company services various areas of operations that include financial accounting outsourcing, human resource outsourcing, customer relationship management, knowledge process outsourcing, technical support services and supply chain management. HCL Business services is the largest provider of Telecom BPO services in Asia and runs business processes for world renowned clients in back office services, particularly in the Telecom and retail domain.\textsuperscript{43}

HCL Business Services follows industry best practices and metric-based quality norms for all its processes. This is supported by robust technology infrastructure, strong human resources and a customized training program and transition framework.

\textsuperscript{42} Ibid.
\textsuperscript{43} Ibid.
HCL Business Services is the first BPO company in the world to be appraised at Maturity Level 5 of People CMM. With stringent internal metrics and audit systems, HCL Business Services’ quality certifications include CCA Global Standard, COPC 2000 (CSP Release 4.1) ISO 9001:2000, OHSAS 18001:2007 and ISO 14001:2004; Security Systems Certification – ISO 27001:2005 and audit, ISO 20000:2005 and audit certification in SAS 70 Type II. HCL Business Services is the first Indian and third company in the world to be COPC certified in the specialized areas of collections.44

Today, HCL Business Service ranks among the Top 10 ITeS-BPO companies in India. (NASSCOM & Gartner) and is the largest BPO service provider in Northern Ireland. The UK Trade and Investment (UKTI) published an exclusive case study on HCL Business Services’ engagements in the UK, showcasing the company as an ideal investment of choice. The organization was ranked second by Purdue Benchmark in the Global Peer Group of BPO Service Providers.45

HCL, as it has been alluded to earlier, is quite employee friendly. It protects their welfare and their overwhelming support has stepped up its growth over the years. In June 2014 it earned a total income amounting to Rs. 17156.49 crore. It increased to Rs. 18352.94 crore in June 2015. In June 2016, it suffered a severe set back and stood at Rs. 14403.06 crore.46 However,

46. Ibid.
the company’s achievements picked up in June 2017 taking its total income to as huge an amount as Rs. 20273.64 crore. In June 2018, it reached an all time high of Rs. 22775.00 crore. Similarly, its profit was calculated to be of the order of Rs. 5984.62 crore in June 2014. It increased to Rs. 6345.94 crore in June 2015. Quite unexpectedly, in June 2016 it came down to Rs. 4719.08 crore. In June 2017 it once again registered a reasonably good growth rate and stood at Rs. 6872.69 crore. In June 2018 it bounced back to its vibrant growth mode and netted a profit of Rs. 7362.00 crore. Thus HCL has improved its performance at the national and international levels from June 2017 onwards.

4.6 MICROSOFT

Microsoft was founded in 1975 and is a worldwide leader in software; services and solutions that help people in business to realize their full potentials. Microsoft is a multinational computer technology corporation that develops, manufactures, licenses and supports a wide range of software and hardware products for computing devices. It is headquartered in Redmond, Washington, USA. Its best selling products are Microsoft Windows operating system and the Microsoft Office suite of productivity software.

Microsoft was originally founded to develop and sell BASIC interpreters for Altair 8800, then developed home computer operating systems with MS-DOS in the mid-1980s, followed by the Widows line of operating

47. Microsoft Corporation – Encyclopedia
48. Microsoft to Microsoft disk operating system (MS-DOS, Smart computing. Sand hills Publishing Company 6(3) March 2008, Archieved from the original on April 5.
systems. Microsoft’s original mission was “a computer on every desk and in every home, running Microsoft Software”. The current Microsoft mission statement is “to help people and business throughout the world realize their full potential”. Microsoft has established footholds in other markets; with assets such as the MSNBC cable television network, the MSN network of Internet Services and the Microsoft Encarta multimedia encyclopedia.49

Microsoft is a brand owner of products including Microsoft Windows, Office, Servers, Developer Tools, Expression, Business Solutions and Computer hardware products including mice keyboards and webcams and home entertainment products such as Xbox, Xbox360 and Zune.

Microsoft entered the OS business in 1980 with its own version of Unix, called Xenix. However, it was MSDOS that solidified the company’s dominance. After negotiations with Digital Research failed, IBM awarded a contract to Microsoft in November 1980 to provide a version of the CP/MOS, which was set to be used in the upcoming IBM Personal Computer. For this deal, Microsoft purchased a CP/< clone called 86-DOS from Seattle Computer products, branding it as MS-DOS, which IBM rebranded to PC-DOS. Following the release of the IBM PC in August 1981, Microsoft retained ownership of MS-DOS. Since IBM copyrighted the IBM PC BIOS, other companies had to reverse engineer it in order for non-IBM hardware to run as IBM PC compatibles, but no such restriction applied to the operating systems.50

49. Ibid.
50. Ibid.
Due to various factors, such as MS-DOS’s available software selection, Microsoft eventually became the leading PC operating systems vendor. The company expanded into new markets with the release of the Microsoft Mouse in 1983, as well as publishing division named Microsoft Press. Paul Allen resigned from Microsoft in February after developing Hodgkin’s disease.\textsuperscript{51}


While jointly developing a new OS with IBM in 1984, OS/2, Microsoft Windows, a graphical extension for MS/DOS on November 20. Microsoft moved its headquarters to Redmond on February 26, 1986 and on March 13, the company went public, the ensuing rise in the stock would make an estimate four billionaires and 1200 millionaires from Microsoft employees. Due to the partnership with IBM, I 1990, the Federal Trade Commission set its eye on Microsoft for possible collusion; it marked the beginning of over a decade of legal clashes with the US Government. Microsoft announced the release of its version of OS/2 to original equipment manufacturers on April 2, 1987, meanwhile the company was at work on a 32-bit OS, Microsoft Windows NT, using ideas from OS/2; it shipped on July 21, 1993 with a new modular kernel and the Win32 application programming interface, making porting from 16-bit Windows easier. Once Microsoft informed IBM of NT, the OS/2 partnership deteriorated.\textsuperscript{52}


Microsoft introduced its office suite, Microsoft Office in 1990. The software bundled separate office productivity applications such as Microsoft Word, and Microsoft Excel. On May 22, Microsoft launched Windows 3.0 with a streamlined user interface graphics and improved protected mode capability for the Intel Processor. Both Office and Windows became dominant in their respective areas. Novell, a Word competitor from 1984-1986 filed a lawsuit years later claiming that Microsoft left part of its APIs undocumented in order to gain a competitive advantage.

On July 27, 1994, the US Department of Justice, Antitrust Division filed a Competitive Impact Statement that said, in part: “Beginning in 1988, and continuing until July 15, 1994, Microsoft induced many OEMs to execute anti-competitive ‘per processor’ licenses. Under a per processor license, an OEM pays Microsoft a royalty for each computer it sells, containing a particular microprocessor, whether the OEM sells the computer with a Microsoft operating system or a non-Microsoft operating system. In effect, the royalty payment to Microsoft when no Microsoft product is being used acts as a penalty, or tax, on the OEM’s use of a competing PC operating system. Since 1988, Microsoft’s use of per processor licenses has increased.53

4.6.2 Financial Status

Standard and Poor’s and Moody’s have both given a AAA rating to Microsoft, whose assets were valued at $41 billion as compared to only $8.5

billion in unsecured debt. Consequently in February 2011 Microsoft released a corporate bond amounting to $2.25 billion with relatively low borrowing rates compared to government bonds.54

For the first time in 20 years Apple Inc. surpassed Microsoft in Q12011 quarterly profits and revenues due to a slowdown in PC sales and continuing huge losses in Microsoft’s Online Services Division.55 Microsoft profits were $5.2 billion, while Apple Inc. profits were $6 billion, on revenues of $14.5 billion and $24.7 billion respectively.56

Microsoft’s Online Services Division has been continuously loss making since 2006 and in Q12001 it lost $726 million. This follows a loss of $2.5 billion for the year 2010.57

On July 20, 2012, Microsoft posted its first quarterly loss ever, despite earning record revenues in the same fiscal year. Microsoft reported a net loss of $492 million.58

4.6.3 Environment

Microsoft is ranked on the 17th place in Greenpeace Guide to Greener Electronics that ranks 18 electronics manufacturers according to their policies on toxic chemicals, recycling and climate change. Microsoft’s timeline for phasing out BFRs and phthalates in all products is 2012 but its commitment to

56. Ibid.
57. Ibid.
58. Ibid.
phasing out PVC is not clear. As yet it has no products that are completely free from PVC and BFRs.

Microsoft’s main US campus received a silver certification from the Leadership in energy and Environmental Design program in 2008, and it installed over 2000 solar panels on top of its buildings in its Silicon Valley campus, generating approximately 15 percent of the total energy needed by the facilities in April 2005.

Microsoft makes use of alternative forms of transit. It created one of the world’s largest private bus systems. The “Connector” transports people from outside the company; for on-campus transportation, the Shuttle Connect” uses a large fleet of hybrid cars to save fuel. The company also subsidizes regional public transport as an incentive. In February 2010, however, Microsoft took a stance against adding additional public transport and high occupancy vehicle lanes to a bridge connecting Redmond to Seattle; the company did not want to delay the construction any further. Microsoft was ranked number 1 in the list of the World’s Best Multinational Workplaces by the Great Place to Work Institute in 2011.59

4.6.4 Marketing

In 2004, Microsoft commissioned research firms to do independent studies comparing the total cost of ownership of Windows Server 2003 to

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Linus; the firms concluded that companies found Windows easier to administrate than Linux, thus those using Windows would administrate faster resulting in lower costs for their company. 60 This spurred a wave of related studies; a study by the Yankee Group concluded that upgrading from one version of Windows server to another costs a fraction of the switching costs from Window Server to Linus, although the companies surveyed noted the increased security and reliability of Linux servers and concern about being locked into using Microsoft products. Another study, released by the OSDL claimed that the Microsoft studies were “simply outdated and one-sided” and their survey concluded that the TCO of Linux was lower due to Linux administrators managing more servers on average and other reasons.

As part of the “Get the Facts” campaign Microsoft highlighted the NET trading platform that it had developed in partnership with Accenture for the London Stock Exchange, claiming that it provided “five nines” reliability. After suffering extended downtime and unreliability the LSE announced in 2009 that it was planning to drop its Microsoft solution and switch to a Linux based one in 2010.61

Microsoft adopted the so-called “Pan-Man Logo”, designed by Scot Baker in 1987. Baker stated “The new logo, in Helvetica italic typeface has a slash between the o and s to emphasize the “soft” part of the name and convey motion and speed.” 62 Dave Norris ran an internal joke campaigning to save the

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62. Ibid.
old log, which was green, in all uppercases, and featured a fanciful letter O, nicknamed the blibbet, but was discarded. Microsoft logo with the “Your potential, our passion” tagline below the main corporate name, is based on a slogan Microsoft used in 2008. In 2002, the company started using the logo in the United States and eventually started a TV campaign with the slogan, changed from the previous tagline of “where do you want to go today”? During the private MGX (Microsoft Global Exchange) conference in 2010, Microsoft unveiled the company’s next tagline, “Be what’s Next”.63

Microsoft has been acclaimed as one of the most valuable companies in the world. Its total turnover was found to be of the order of Rs. 311.00 crore in 2014-2015. It increased to Rs. 6201.00 crore during 2015-2016.64 Microsoft reported a net profit of $ 17 billion in 2012. It increased to $ 21.9 billion in 2013 surprisingly it came down to $ 12.2 billion in 2018.65 Thus, the growth in terms of profits has not been steady as far as Microsoft is concerned.

The spectacular growth registered by some of the reputed SW companies show the challenges and competition, the SW world is replete with. The massive achievements of the companies listed above mirror the hard work put in by software professionals. It goes with out saying that stress-ridden jobs lead to the pomp and glory of the SW world.

63. Ibid.
65. Ibid.