



Coimbatore - An IT & ITES Destination of Choice



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FOREWORD

Close on the heels of the Honourable Chief Minister of Tamil Nadu's announcements on the initiative to develop Tier II towns in Tamil Nadu, we are pleased to put forth a comprehensive study on Coimbatore as an IT destination and to establish the viability of an IT park in Coimbatore. This comes along with surveys conducted by India Today, Business Today and Outlook Money. Coimbatore has been ranked among top 10 cities for doing business.

This report in public private partnership between CII and the Government of Tamil Nadu validates the feasibility of setting up the IT Park in Coimbatore and as per forecasts, the city is likely to witness a total employment potential of around 14000 IT & ITES professionals by the year 2008.

Coimbatore is a resource rich city and has the capacity to fulfill talent requirements of IT & ITES organizations. The current graduating strength in Coimbatore alone is around 20,000 in engineering and 28,000 in arts, science & commerce streams.

As far as telecom connectivity is concerned, Kochi and Chennai are the most accessible landing points for broadband. The proximity to both the landing points is an advantage for ensuring reliable and cost effective telecom connectivity.

TN has always been a power intensive State supporting large manufacturing industries. The power scenario is stable and is adequate for large IT & ITES organizations.

Leading companies such as Wipro, Satyam and TCS have indicated their willingness to set up their operations in Coimbatore. The city is resource ready and provides a pool of skilled workforce in and around the city.

In the future scenario, there will be a need to improve the flight frequencies to facilitate conferences, tradeshows, meetings and strategic alliances as Coimbatore is poised to become the most strategic Tier II IT destination in Tamil Nadu.

SECRETARY TO GOVERNMENT

Acknowledgements

At the outset, team members from CII, PricewaterhouseCoopers (P) Ltd. and the industry have provided valuable insights to enable a comprehensive coverage of issues and provide relevant information for the feasibility study.

We are thankful to the participants of the primary research conducted as part of the study.

We would like to thank the contributions made by the Government of Tamil Nadu, ELCOT, CODISSIA, ICCI, & SIEMA.

Our thanks to Mr. Vivek Harinarain, IT secretary of Tamil Nadu for his guidance throughout the project.

We also thank Mr. Hans Raj Verma, former Managing Director of ELCOT, Mr Sudeep Jain, Managing Director of ELCOT and Mr. K.S. Lakshminarayanan, Chief Technical Advisor, ELCOT for their key inputs during the project.

We would like to place special word of thanks to the steering committee, Mr. V Paramasivam, Mr. Arun Jain, Mr. Raghavendra Prasad, Mr. Virendra Gupta, Mr. Mahesh, Mr. Chandrasekharan & Mr. Rajesh.

We would also like to thank members of the team – Mr. Joydeep Datta Gupta, Mr. V A Raghu, Ms. Sanjukta Pal, Mr. M P Harikrishnan, Mr. A R Parthasarathy, Ms. V Hemalatha, Ms. Sarika Pradhan, Mr. Manish Malecha, Mr. Rajkumar Gopalan.

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Executive Summary

Objectives of the study

This report provides a detailed study of Coimbatore as an IT destination and feasibility of setting up of an IT park. The report presents a comprehensive analysis of:

- Suitable business models
- The existing and forecast demand pattern
- The factors that influence demand and their availability in the forecast period
- Recommendatory framework and action steps

Industry analysis

As per Gartner estimates, the total Business Process Outsourcing (BPO) / IT enabled services (ITES) market worldwide will be around 234 Bln USD growing at a compounded average growth rate (CAGR) of 14.4 % by the close of 2008. Approximately, 21 Bln USD is the potential for Indian BPO companies.

As per IDC/ SSKI estimates, the total market for IT services worldwide will be around 814 Bln USD by the year 2008. Mckinsey estimates that the Indian opportunity for IT services would be around 28 Bln USD by the year 2008.

As per STPI estimates, the states of Tamil Nadu, Andhra Pradesh and Karnataka more popularly addressed as the Knowledge Triad currently contribute to around 60% of India's annual IT export turnover. They will continue to play a dominant role in the emerging BPO businesses and IT services.

To address these opportunities and to gear up for global competition, some of the imperatives for Indian organizations involve:

- Expanding products / services portfolio
- Reinforcement of quality in products and services
- Identifying niche areas for growth to expand existing client base
- Competitively pricing products and services.

Competitive pricing at the same time retaining the quality of service is a key challenge for the growth of the IT/ITES organization. As per analysis conducted by PwC the profitability margins could dip by as much as 65% if billings dip to USD 5/ hour, assuming that the current rate is 10 USD /hour.

From this perspective, Coimbatore offers resources that fulfil organizational requirements. Analysis shows that Coimbatore as a business destination is suitable for IT / ITES organizations from two standpoints.

- Tapping alternate quality talent at cost effective prices. The migration model presented in the report validates this presumption
- Addressing new business opportunities through utilizing existing knowledge base in IT related fields for instance engineering design. The domain model presented in the report testifies this.

PwC has conducted a detailed primary research to validate the above assumptions. Close to around 71 organizations from a sample base of 200 organizations have expressed their interest in setting up a base in Coimbatore. The total employment potential based on the primary research has been set out in table below. The evaluations have been conducted under three scenarios.

Table showing potential of employment in Coimbatore by 2008			
Scenarios	Optimistic	Likely	Conservative
	100%	85%	60%
No of people (developers)	18340	13970	8163

Source: PwC research of IT/ITES organizations

Critical success factors - supply side factors

Certain factors determine the sustainability of business during the start-up and the day-to-day operations. For instance an IT /ITES business would require:

- Availability of talent
- Adequacy of real estate
- Availability of power
- Connectivity

As per forecasts and current availability status, Coimbatore adequately fulfils business factor requirements. A detailed analysis has been presented in the report.

SCOT analysis

Coimbatore's strength to attract business lies in its :

- Captive talent pool of approx. 20000 engineering graduates and approx. 28000 non-engineering graduates
- Enterprising community
- Salubrious climate

The table below represents the SCOT analysis conducted on Coimbatore.

Strengths	Opportunities
<ul style="list-style-type: none"> ▪ Telecommunication connectivity ▪ Talented Manpower availability from a pool of colleges in Coimbatore ▪ Vast pool of manpower- Trichy, Madurai ▪ Enterprising community ▪ Salubrious climate ▪ Proximity to hill stations attracting foreign tourist and faculty ▪ Many weekend getaways and international standard golf course 	<ul style="list-style-type: none"> ▪ Extension to IT from manufacturing relatively unexplored ▪ Captive software products for the small and medium enterprises ▪ Internet data centers ▪ Leverage people resource in BPO
Challenges	Threats
<ul style="list-style-type: none"> ▪ Improved air connectivity to important cities ▪ Lack of adequate deluxe quality hotel infrastructure 	<ul style="list-style-type: none"> ▪ IT projects already kick started at Thiruvananthapuram and Kochi ▪ Promotion of other Tier II towns in neighboring states by their respective governments.

The business models would translate the strengths into opportunities, given that the existing connectivity and hotel infrastructure would be improved. There is also an intense need to accelerate pace as the neighbouring state of Kerala is gearing up for attracting IT investments.

Recommendatory framework

Salient features for the recommendatory framework are :

Government

- E-enabling single window clearance mechanism at the macro level.
- Joint venture with private sector for consultation on set up issues and empower local custodian on quick decisions.
- Soliciting the participation of government departments in enabling the same.
- Fiscal subsidies to provide cutting edge cost advantage to the Companies at Coimbatore.

Industry

- Business entry plan into allied IT/ITES related fields to address emerging opportunities in domain areas.
- Develop training and skill sets requirements of the captive Coimbatore talent in IT/ITES related fields.
- Associate and partner with associations such as CII, CODISSIA, SITRA & SIMA to develop IT/ITES business in new geographies and new research segments.

Association

- Institute in-house classroom training along with industry on basic skills in the IT/ITES workplace.
- Develop center for excellence promoting and commercial tapping business / intellectual ideas in association with academia.
- Rope in Sponsors for building the Coimbatore brand.
- Publish white papers outlining inherent strengths for setting up IT/ITES business in Coimbatore.

- Develop marketing campaigns - events, brochures, flyers and other marketing collateral aimed at promoting Coimbatore in select metro towns in India. Interact with investment community to upgrade the existing infrastructure available for IT/ITES business.
- Interact with leading support services providers and maintain current database for quick contact references.

Conclusion

As per the research conducted by PwC, Coimbatore is a suitable IT destination and setting up an IT Park is feasible. As per the expansion plans of organizations in the migration model w.r.t Coimbatore, there is an immediate requirement of approximately 0.6 million Sq ft quality IT park space to be gradually scaled up to total workspace of 1.4 million Sq ft for 14000 professionals by the year 2008. The total estimated export revenues arising from this inflow could be in the region of USD 113 mln by the year 2008. The revenue potential emerging from the domain opportunity would be in the region of USD 50 mln by the year 2008.

To facilitate business needs of the IT/ITES organizations, general infrastructure needs to be enhanced. The areas include improving the flight frequencies and timing, upgrading the hotel infrastructure, establishing adequate redundancy, power supply and support services.

Demand Side Analysis

PwC has conducted a detailed demand analysis covering select segments in IT / IT Enabled Services / BPOs. The research involved interviews with 200 industry representatives to validate key assumptions, hypothesis and the business models developed by PwC for the purpose of conducting the study.

As part of the demand analysis, an exhaustive research on global IT / ITES opportunities, the Indian opportunities and the importance of the knowledge triad was conducted.

The key findings are elaborated in this section.



1.1 The Global IT/ITES industry

The ITES / BPO industry

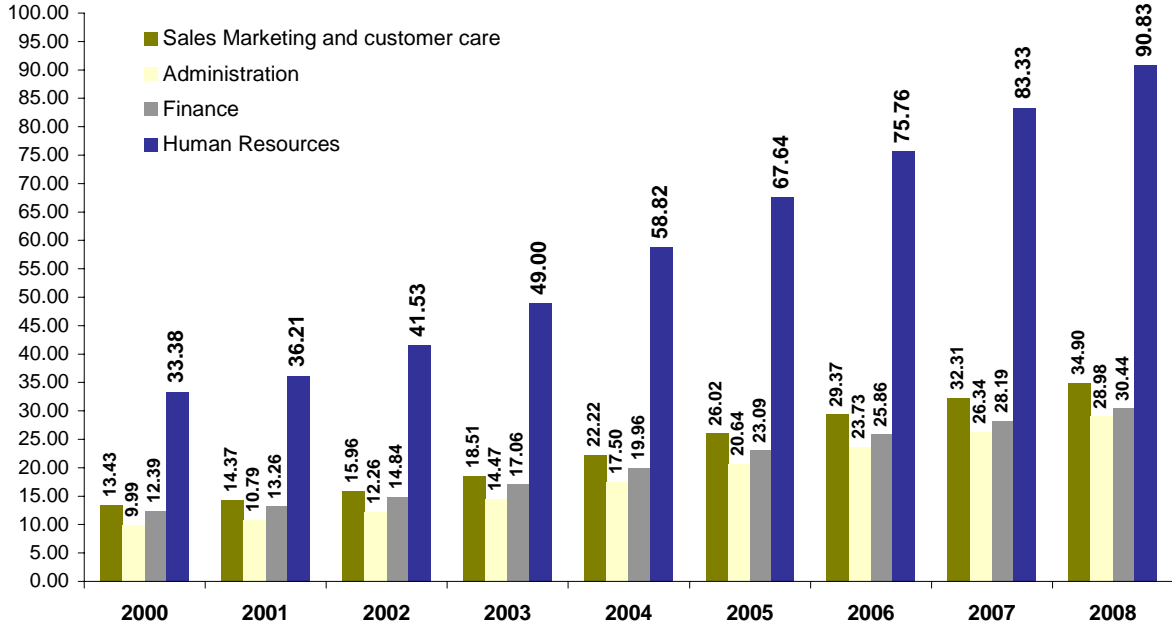


Exhibit 0-1 Chart showing the global potential of ITES / BPO by the year 2008

Source: Gartner, PwC analysis

Figures in Billion USD

As per Gartner estimates, the global market for ITES / BPO activity will be around 234 Bln USD by the year 2008¹ growing at a CAGR of 14.4 %. Globally the largest segments are human resources, sales marketing and customer care, finance and administration. The above chart represent select segment opportunities of the total global market for ITES / BPO activities.

¹ 2008 has been used as the bench mark period for forecast for correlation with existing estimates in the market



The IT services industry

As per IDC / SSKI estimates, the total market for IT services worldwide will be around 814 BIn USD by the year 2008. The largest segments are IT outsourcing, system integrations, deployment and support.

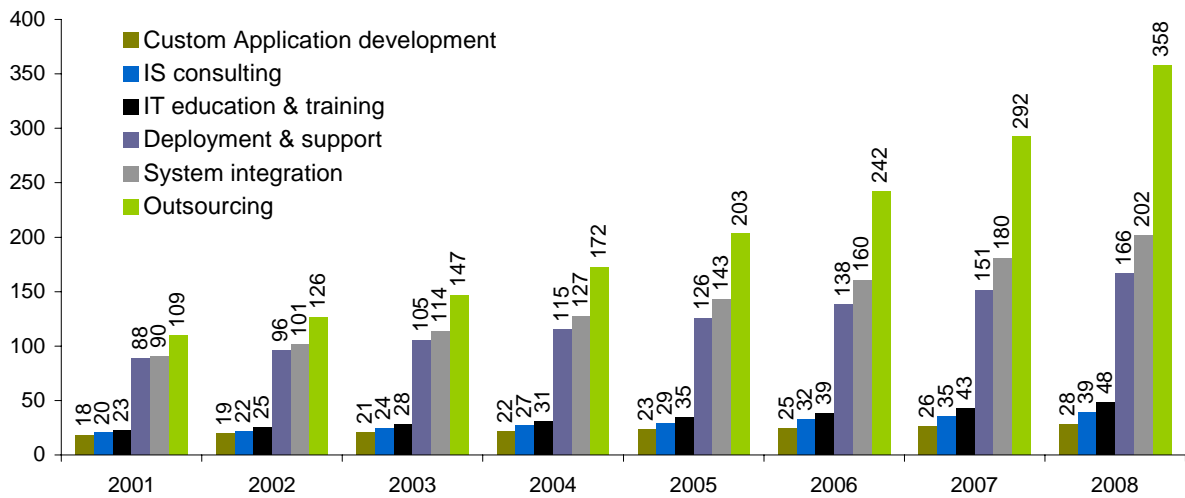


Exhibit 0-2 Software industry market size, growth & segments

Source: NASSCOM, PwC Analysis

Figures in Billion USD

India is among the countries vying to capture a portion of the global pie. Destinations such as China Philippines, Mexico, Malaysia, offer themselves as attractive locations for outsourcing non-core processes and IT related activities. These places compete with each other on the basis of talent and costs.

1.2 The Indian IT/ITES industry

The ITES / BPO industry

Out of the global opportunity, around 21 Bln USD would be the market potential for India ITES / BPO organizations.

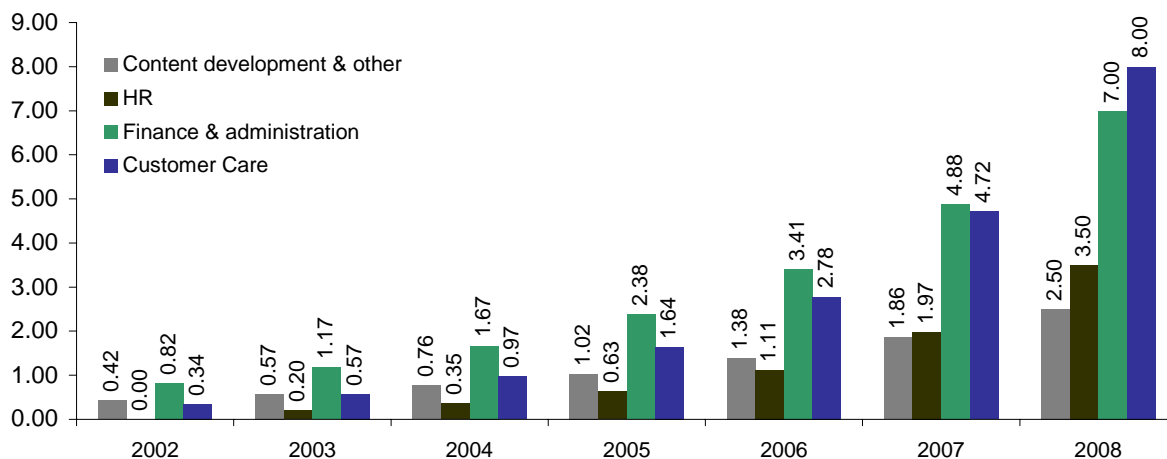


Exhibit 0-3 Chart showing the potential of Indian ITES by the year 2008

Source: Mckinsey, PwC analysis

Figures in Billion USD

ITES / BPO essentially is driven by the availability of excellent process skills matched with business affordability. Some of the factors that make India as the chosen high grounds for ITES / BPO are:

- High quality human resources.
- The second largest English speaking population in the world.
- Location in a convenient time zone.
- The cost difference, which companies derive by operating in India.

The following facts throw some light on the outsourcing opportunities in India :

The survey conducted by Merrill Lynch reveals that 46 % of the US Fortune 500 companies had considered India for outsourcing in 2001-02, as compared to 14 % in 2000-01.

According to a Nasscom-Mckinsey report, the revenues from IT enabled services have increased by 180 percent to Rs 11.7 billion in 2002-2003 as compared to Rs. 4.25 billion in 2000-2001.

As per Jones Lang Lasalle, wage rates in India are the lowest (USD 33.75 per week) in the call centre industry as compared to the USD 400 per week in USA and USD 470 per week in Australia.

Some of the key segments where Indian organizations have established a strong hold are the finance & administration, the customer care, and technical help desk such as content development, troubleshooting in the ITES segments. The emerging areas include engineering design, payroll services, claims processing and billing services.

Software organizations, largely the SMEs are scaling up the value chain to offer cutting edge products/services and are leveraging their expertise in their BPO entry strategies.



The IT services industry

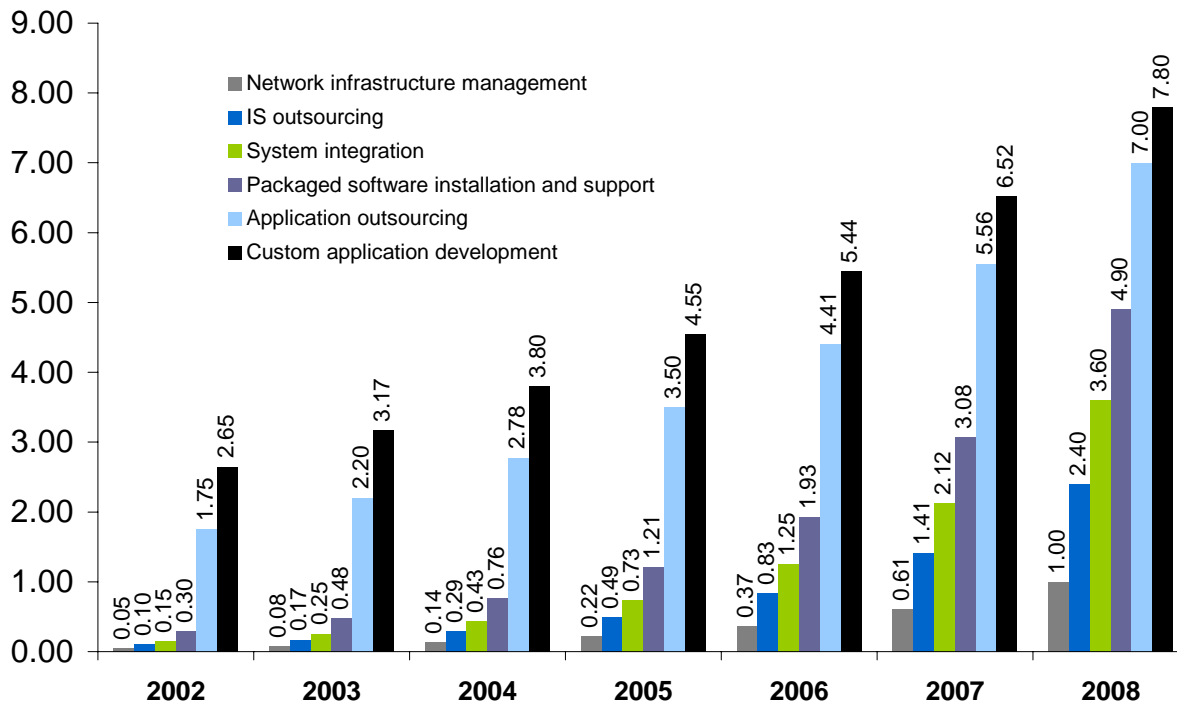


Exhibit 0-4 Chart showing the potential of Indian IT services exports by the year 2008

Source: NASSCOM, Mckinsey

Figures in Billion USD

According to Mckinsey estimates, close to around 28 - 30 Bln USD would be the market that Indian companies will tap into by the close of 2008. As per forecasts, the leading contributions would flow in from the custom application development and application outsourcing segments.

Pricing of services assumes importance in these segments and to globally compete, Indian IT services organizations would seek to provide quality services at optimum prices.

1.3 The Knowledge Triad

The states of Tamil Nadu, Andhra Pradesh and Karnataka in South India, more popularly addressed as the knowledge triad currently contribute to around 60% of India's annual IT export turnover. They will continue to play a dominant role in the emerging BPO businesses and IT services. The following charts represent the contribution of the knowledge triad to the annual Indian IT exports.

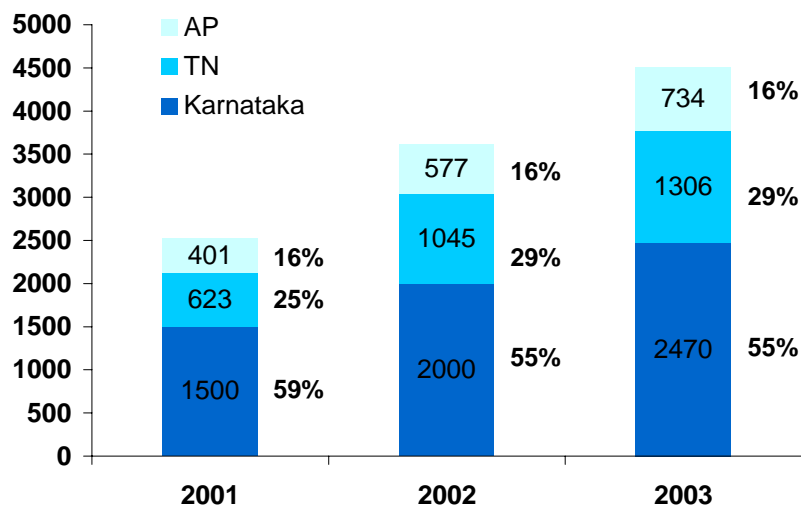


Exhibit 0-5 Export revenues from the knowledge triad

Source: STPI (TN figures for 2003 – estimated by PwC)

Figures in Mln USD

The reason for this prominence of the Knowledge Triad is explained by a dominant presence of engineering institutions that provide a pool of IT talent.

Scripted below are representative of the institutions in Southern India :

Institution	Location	Techno Industrial focus
IIT	Chennai, TN	Telecommunications and networking incubating companies focused on new product development
Anna University	Chennai, TN	AUKBC Electronics & IT based engineering courses tailored to suit organizational requirements
IISc	Bangalore, Karnataka	IISc provides research environment and infrastructure for conducting high end research attracting organizations from international zones
IIIT	Hyderabad, AP	A specialized institution focusing on exclusive disciplines in Information technology with sponsorships from leading corporates such as Microsoft.
Trichy REC	Tamil Nadu	Engineering college providing key skill sets in IT domains
Suratkal REC	Karnataka	
Manipal Engineering College	Karnataka	
Warangal REC	Andhra Pradesh	
Bharatiar University	Coimbatore, Tamilnadu	
PSG College of Technology		
Coimbatore Institute of Technology		
Govt. College of Technology		

Exhibit 0-6 List of prominent institutes present in the knowledge triad

Along with talent resources, the states also provide for adequate connectivity, power supply, government support and other factors. These critical success factors have been discussed in detail in section 4 of the report.

1.4 Suitable Business Models

In the growing competitive environment business would seek to thrive by :

- Differentiating existing products through functionality, reliability, convenience and price. This leads to the rationale decision of migration to locations providing these differentiators.
- Identifying emerging new product opportunities to sustain in the marketplace. One of the key opportunities is to establish IT / IT related opportunities in domain areas such as engineering, textiles etc.

PwC has undertaken a comprehensive analysis to identify migration and domain requirements of IT/ITES organizations as part of the primary research.

Migration model

There are four basic ways in which products can be differentiated, namely, functionality, reliability, convenience and price. Initially products are differentiated based on their functionality i.e., what features they possess. If a product has additional features, which the market needs, then the demand for that product will outweigh that of its competitors. Hence initially products will be differentiated based on their functionality.

However, when the functionality of two or more products has improved beyond the demands of the market, then customers can no longer base their choice on functionality. In this case, product differentiation and hence customer selection will shift next to reliability of the products. If one product is more reliable than the other, then customers will prefer it.

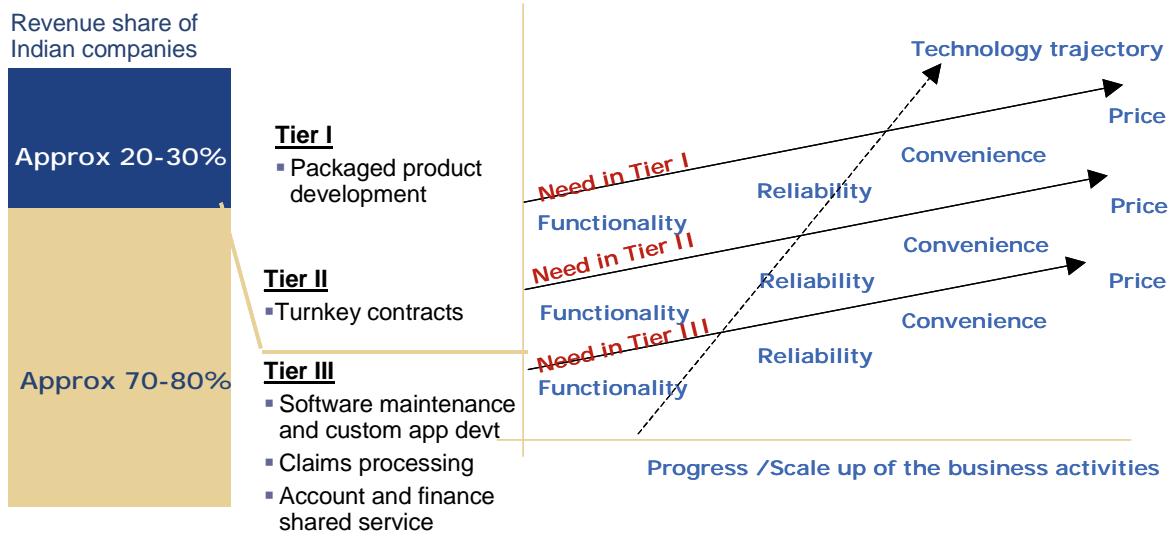


Exhibit 0-7 The product/service differentiation continuum

Source: *The Innovator's Dilemma*, Clayton. M. Christensen

Once reliability becomes an irrelevant factor, i.e., when products become equally reliable, then product differentiation will shift to the next factor - convenience. Convenience is explained as the ease at which the particular requirement or product is made available. Satisfying product functionality requirements and reliability, the customer would be eager to extend his wants to convenience.

Finally, when functionality, reliability and convenience are no longer differentiating factors then the customer focus shifts to price. This would lead to entrepreneurship and innovation.

This situation is depicted in the schematic above. As functionality increases, the differentiating factor shifts to the next level. Therefore lower end products are more likely to be differentiated based on cost or convenience since all the different makers will be able to provide the same levels of functionality and reliability. Similarly higher end products are more likely to be differentiated based on performance or reliability.

The knowledge triad illustrates these trends taking shape in the current scenario. The cluster of all high end and low end IT businesses are dominantly located in the cities of Chennai, Bangalore and Hyderabad. These organizations provide the desired extent of quality with considerable consistency. However as more organizations opt to exploit the global opportunity, differentiation would scale from functionality, reliability and convenience to price. This is true for low end business such as application outsourcing, transaction processing, e-mail based call centre services where a large number of SMEs in the metros seeking to thrive would choose to differentiate on the basis of price. The migration of low-end businesses would take place to cost effective destinations such as Coimbatore.

The performance and reliability of low-end jobs can be replicated even in Tier II cities. The minor loss in convenience would be more than offset by the simultaneous cost advantages obtained. The convenience factor too would improve with time as the infrastructure develops in the Tier II cities.

This could be a continuous process with the low-end jobs being shifted to cost effective locations. The model can be applied to the Indian IT infrastructure industry as a whole. IT companies comprising the customer base will evaluate locations on the basis of functionality, reliability, convenience and prices of locations. These locations for instance, could be existing IT park infrastructure in different cities. The important functional requirements are talent, connectivity power & infrastructure facilities readily available. Reliability is explained as the consistencies in infrastructure performance, availability of support services during crisis or downtime. Convenience is defined as the ease of access to the particular site. Price would be the cost of operations at which the IT park site is available.

The customer base could suitably be segmented depending on the activity levels. The IT & ITES activities, segmented into different tiers have been set out in the table below.

Businesses	ITES	IT
Tier I	Strategic BPO (legal advisory, health care etc)	IT consulting, products packages
Tier II	Technical help desk trouble shooting in vertical domains	Custom application development, package software installation and support
Tier III	Low end of transcription, back office processing in finance & accounting and select customer contact activity	Maintenance and software support

Exhibit 0-8 Tiers of products & services in IT /ITES

The customers of the IT companies will also be aware of the cost factor. Since the Indian IT companies also have competitors in other countries in Europe and Asia, they will have to be a step ahead of the others if they want to retain and expand their market. IT companies will have to reduce their costs for Tier III & Tier II operations otherwise they might run the risk of losing their existing market. In order to do so they will have to explore new avenues of cost reduction, such as moving to Tier II locations in India in order to take advantage of the cost benefits available. The migration model explains this phenomenon by analysing overheads constituting the operational costs for an IT/ITES company.

1.4.1.1 Cost of operations

As mentioned earlier, due to competition from nations such as China Philippines, Mexico & Malaysia, billings would come under considerable pressure. Analysis below summarizes prices and profitability under billings of 10² USD/ hr and an alternative scenario of USD 5 hr.

² The rates have been taken based on analysis of small and medium companies in export based IT / ITES operating in Chennai in the activities of back office processing and customer contact.

The analysis has been conducted for select cities in the knowledge triad. The table below provides profitability scenarios across cities at billing rates of USD 10/ hr and at USD 5/ hr.

	Chennai	Bangalore	Hyderabad	Kochi	Coimbatore
Revenues	100%	100%	100%	100%	100%
Overheads					
Manpower	26%	27%	26%	21%	20%
Real estate	8%	9%	5%	3%	3%
Power	1%	2%	1%	1%	1%
Connectivity	2%	2%	2%	1%	1%
Marketing	10%	10%	10%	10%	10%
Misc	2%	2%	2%	2%	2%
PBDIT	51%	49%	54%	62%	62%

Exhibit 0-9 Profitability at billings of USD 10 /hr

Source: PwC Analysis, Industry estimates

	Chennai	Bangalore	Hyderabad	Kochi	Coimbatore
Revenues	100%	100%	100%	100%	100%
Overheads					
Manpower	52%	54%	52%	43%	40%
Real estate	16%	17%	10%	6%	6%
Power	3%	3%	1%	1%	2%
Connectivity	4%	4%	4%	2%	2%
Marketing	10%	10%	10%	10%	10%
Misc	2%	2%	2%	2%	2%
PBDIT	13%	10%	20%	36%	37%

Exhibit 0-10 Profitability at billings of USD 5/ hr

Source: PwC analysis, Industry estimates

Represented below is the impact of lower billing on the product profitability compared across select cities in the knowledge triad.

Chennai

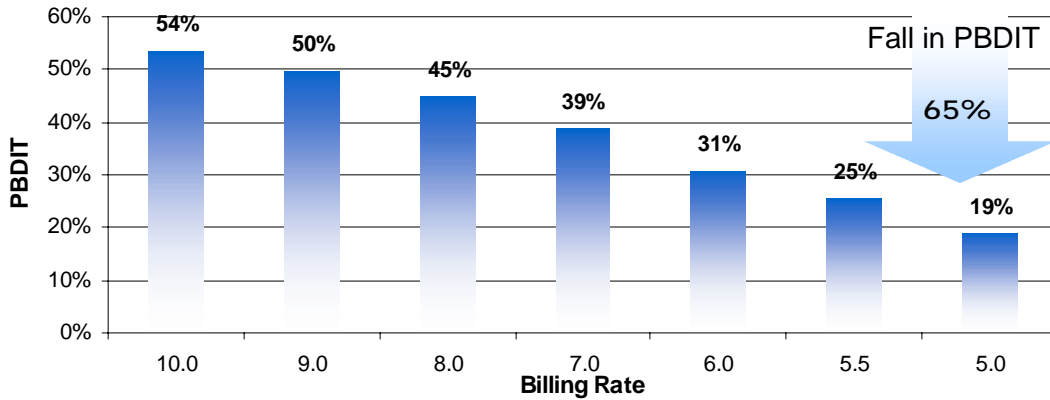


Exhibit 0-11 Tradeoffs in the profitability owing to pressurised billing rates - Chennai

Source: PwC analysis

Bangalore

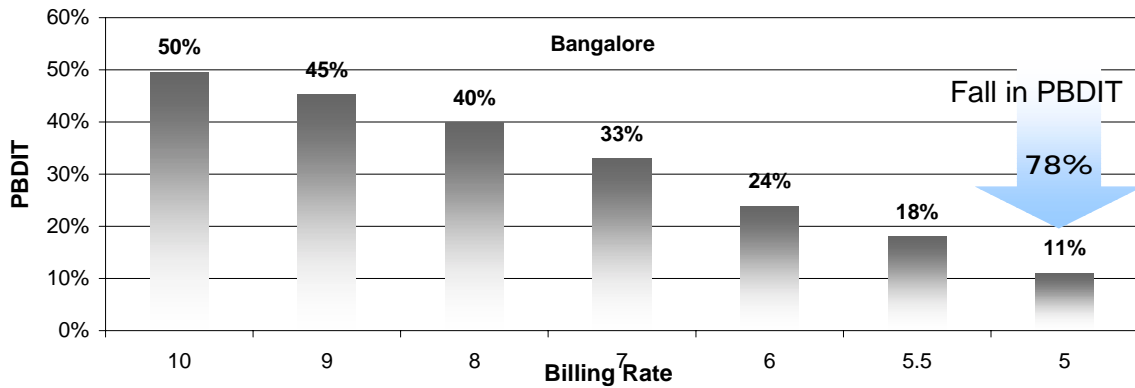


Exhibit 0-12 Tradeoffs in the profitability owing to pressurised billing rates - Bangalore

Source: PwC analysis

Hyderabad

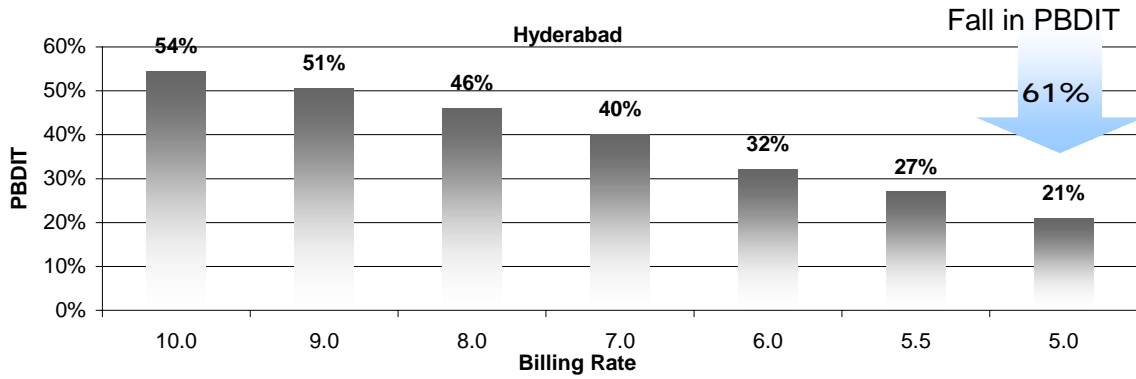


Exhibit 0-13 Tradeoffs in the profitability owing to pressurised billing rates - Hyderabad

Source: PwC analysis

Kochi

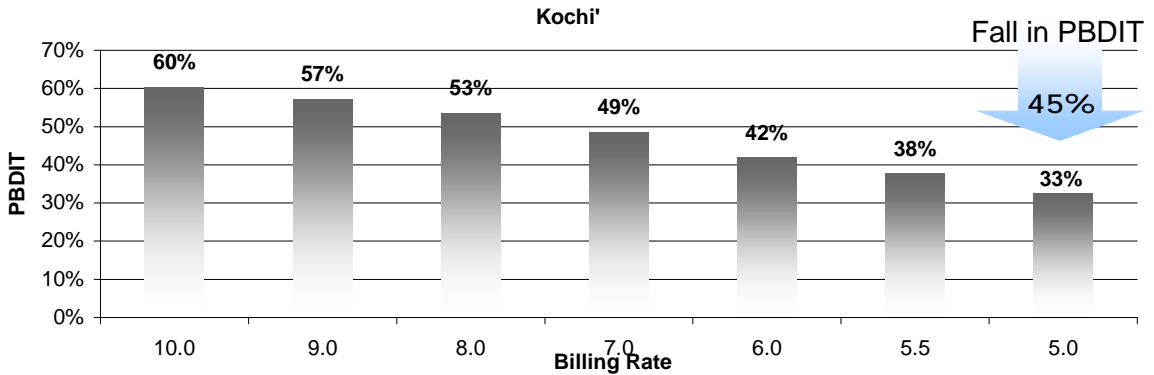


Exhibit 0-14 Tradeoffs in the profitability owing to pressurised billing rates - Kochi

Source: PwC analysis

Coimbatore

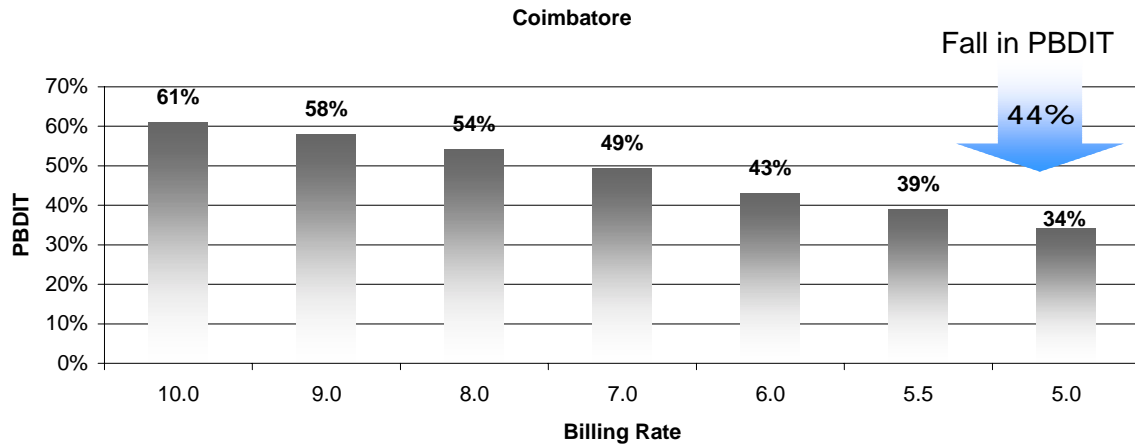


Exhibit 0-15 Tradeoffs in the profitability owing to pressurised billing rates - Coimbatore

Source: PwC analysis

Inference of the Migration model

- Christensen's model emphasizes the importance of price after the complete satisfaction of functionality, reliability and convenience.
- Organizations in the ITES/ IT space operating from India suggest this.
- Price based migration is explained by the migration model, which in turn is validated through the primary research.

Analysis of research findings

As represented in the analysis of cost of operations earlier, pricing pressures would materialize at rates of 5 USD per man-hour. The rationale for a business to relocate depends on the availability and affordability of resources. The most important of these business factors appear in the following chart. The chart displays that among the key criteria are the operational cost and set up costs.

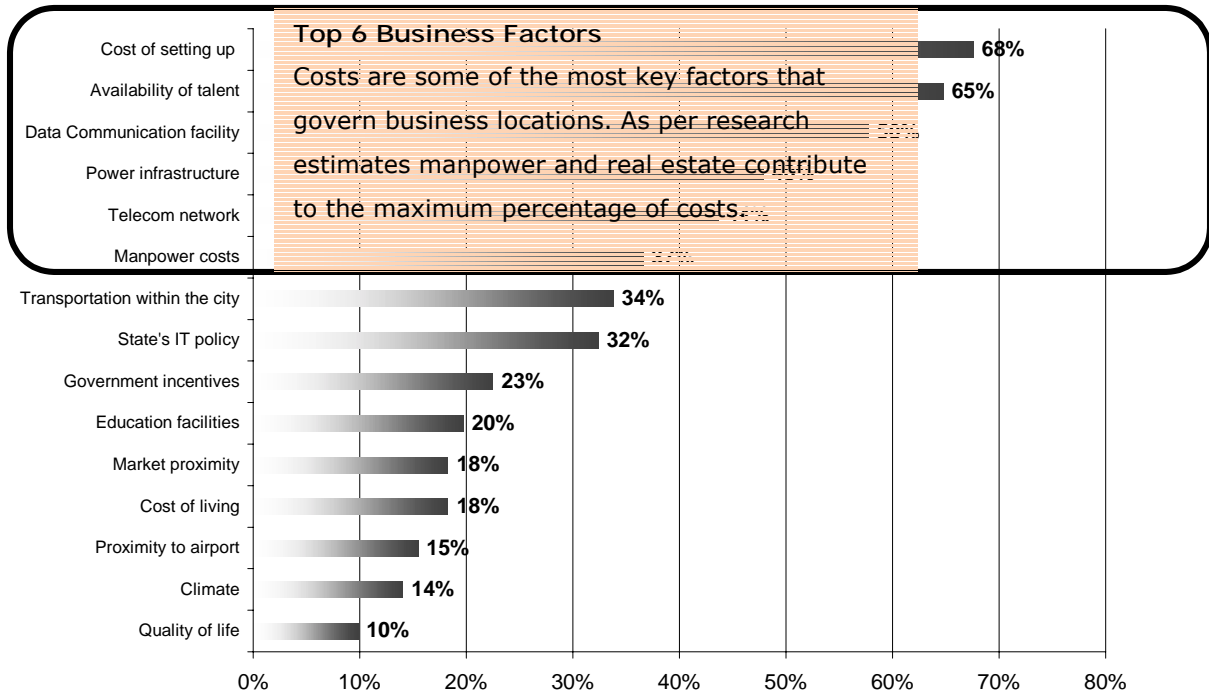


Exhibit 0-16 Critical success factors - IT/ITES business

Source: PwC Research

number of respondents denoted in %

As the chart reveals, the rationale of choosing a location depends on the equitable balance of quality of resources and the cost of hiring such resources. The analysis validates the cost and quality criteria.



Facilities infrastructure required

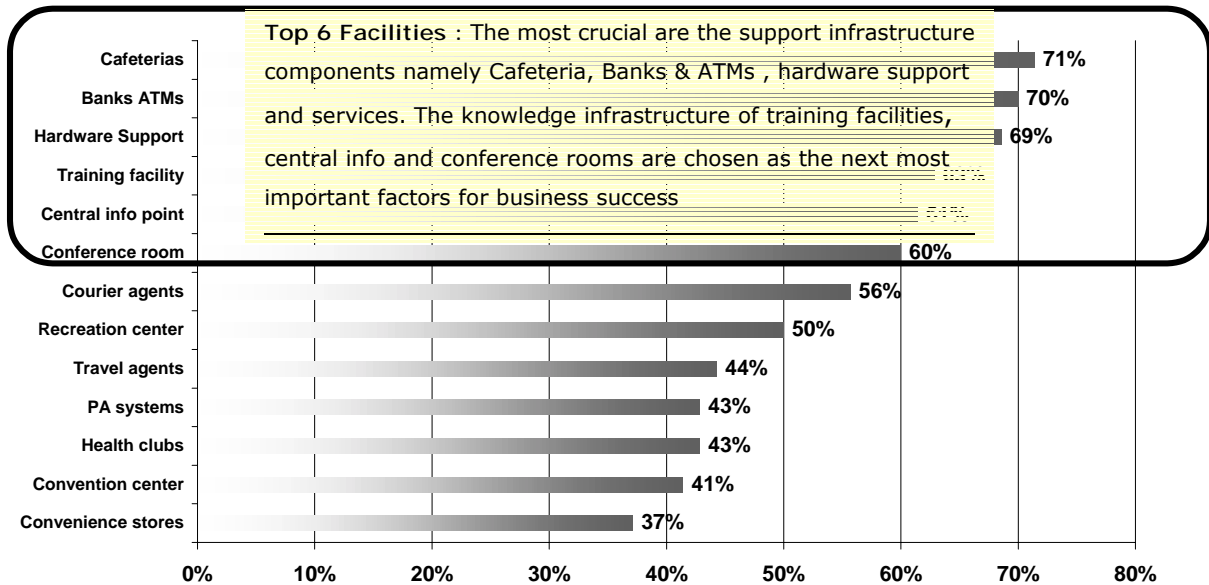


Exhibit 0-17 The Infrastructure and facilities most sought

Source: PwC research

As facilities add up occupancy costs, it is essential to determine the optimum facilities required to operate an IT / ITES business effectively. The common facilities considered essential are cafeteria, Banks ATMs, Hardware support services, training facilities, central information point and conference rooms.

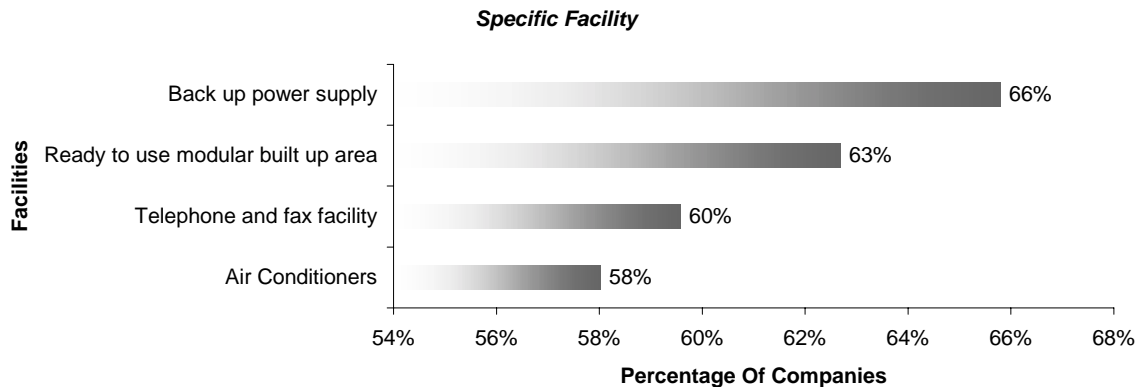


Exhibit 0-18 Specific facility required by the companies in the IT park

Source: PwC research

Though analysis reveals that only 66% of organisations feel “Back up for Power Supply” is essential, back up component will be a very important facility in the IT park premises. Their operation followed by 63% for “Ready to use Modular Built up Area”.

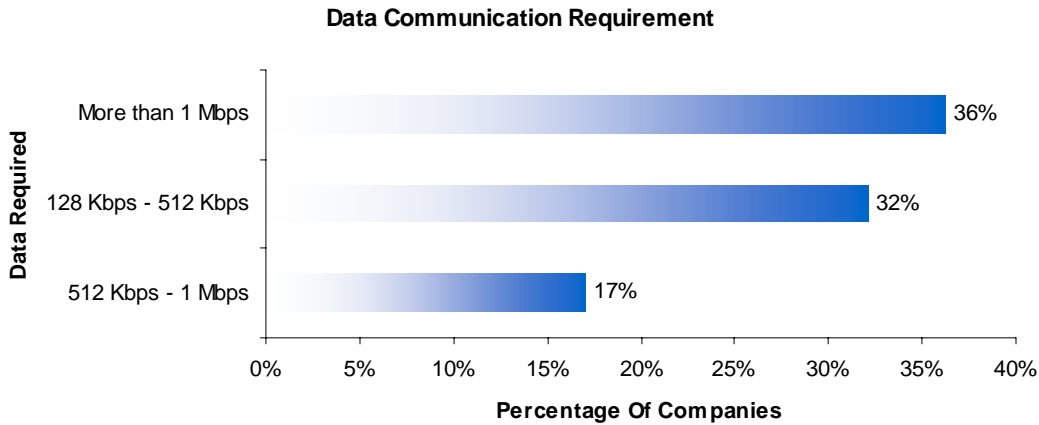


Exhibit 0-19 Data communication required by companies

Source: PwC analysis

1.4.1.2 Critical success factors- given importance

The primary research also dwelt upon perceptual ratings and ranks on the availability of critical success factors in Coimbatore. Factors that have been rated high have been presented in the following chart. Manpower availability is the most vital of all resources. With institutions that span across several disciplines, Coimbatore has the capability to match demands of the corporate. As per estimates of the department of statistics and economics, close to around 49000 students graduate from the colleges in Coimbatore. Approximately 20000 belong to science and engineering backgrounds. There are additional qualified personnel from the neighbouring cities of Madurai and Trichy contributing to another 39000 graduating candidates with close to 50% holding science and engineering qualifications.

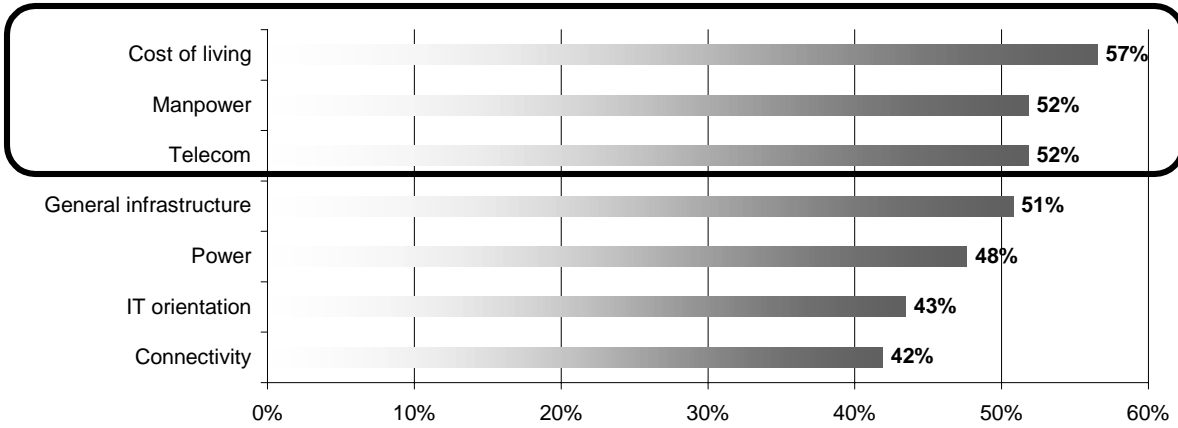


Exhibit 0-20 Factors given importance

Source: PwC research

number of respondents denoted in %

1.4.1.3 Critical success factors- needs improvement

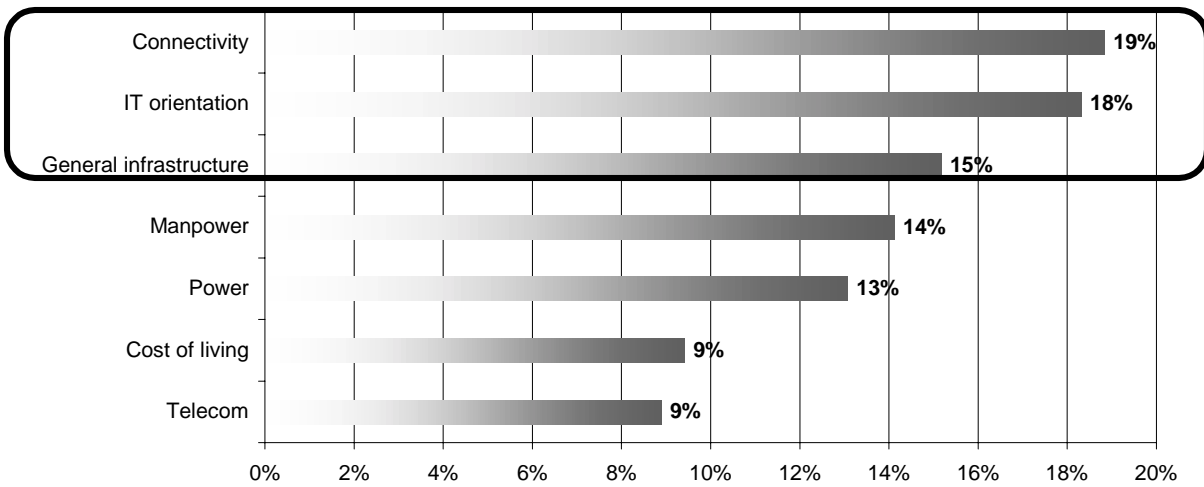


Exhibit 0-21 Factors that need improvement

Source: PwC research

number of respondents denoted in %



Respondents have expressed concern over the existing air connectivity available in Coimbatore. The IT orientation and the general infrastructure are expected to improve though presently rated low.

1.4.1.4 Critical success factors- awareness

An average of 34% of the respondents were unable to provide a perspective of rating for Coimbatore. The reason being that the awareness of Coimbatore as a potential IT destination was absent. It suggests that these respondents retained a neutral view to the city. This probably owing to the fact that they were partially aware about competitive advantages of Coimbatore. The chart below provides the categories of respondents who could not offer any views on Coimbatore.

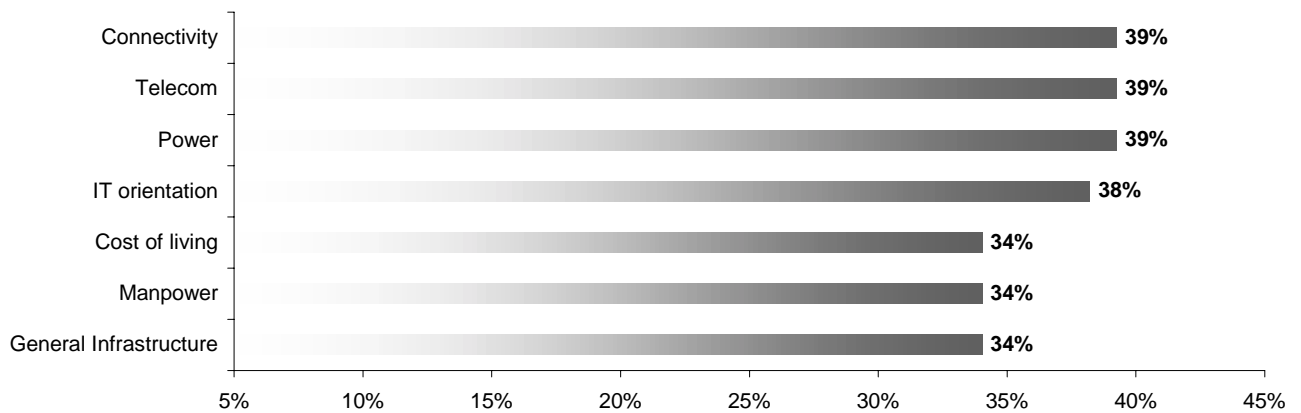


Exhibit 0-22 - % of respondents not fully aware of the IT potential of Coimbatore

Source: PwC research

number of respondents denoted in %

1.4.1.5 Coimbatore as a strategic location to expand base

The following chart expresses the intentions of corporates considering Coimbatore in their expansion agenda. As per the research, close to around 71 respondents expressed their willingness to identify a ready-to-use facility in Coimbatore. Some of the driving forces were

- Availability of talent resources for development work
- Bringing about further efficiency in managing overheads

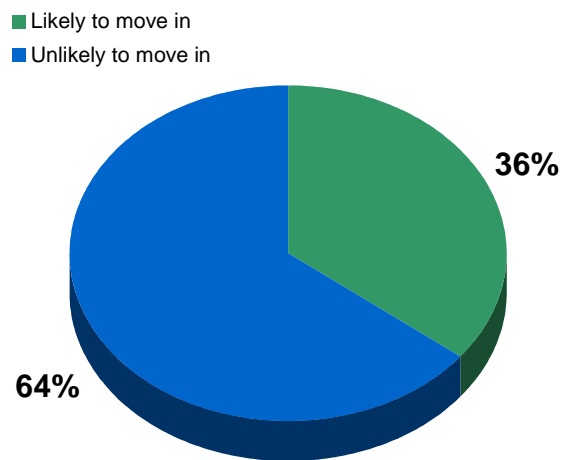


Exhibit 0-23 Analysis of respondents who are likely to consider an IT park space in Coimbatore

Source: PwC research

number of respondents denoted in %

1.4.1.6 Profile of companies researched :

Presented below is the profile of the companies targeted for research in validating the business models. The analysis of the sample size reveals companies predominantly carried out IT / software support activities. Also, companies were largely involved in customer application development.

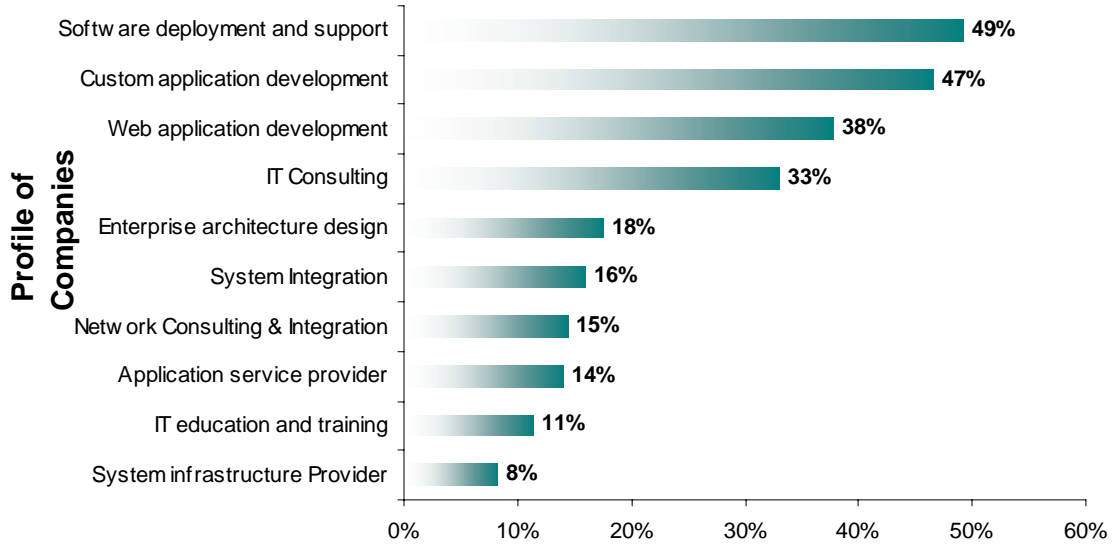


Exhibit 0-24 Profile of companies researched - IT sector (approx. 70 % of the selected sample)

Source: PwC Research

On the ITES front, analysis of the sample size portrays that most of the companies were either carrying out back-office activities or content development.

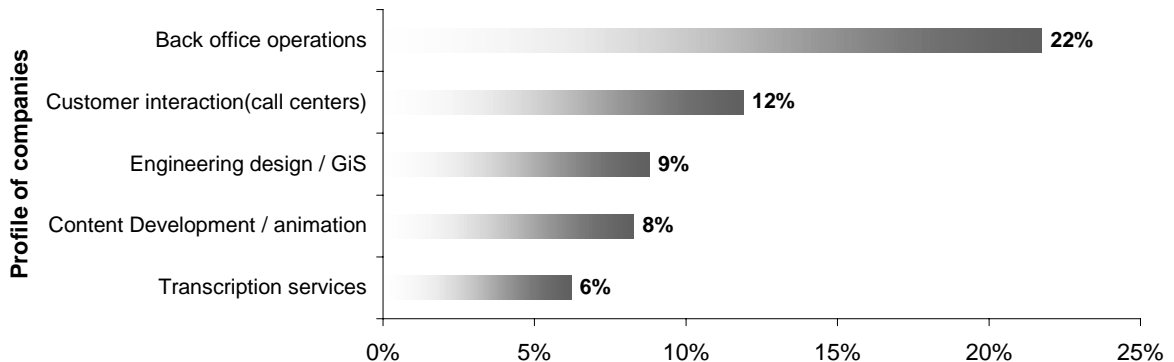


Exhibit 0-25 Profile of companies researched- BPO/ ITES

Source: PwC Research

As per the analysis presented in the charts above, activities of IT organisations were predominantly focussed on IT services support and custom application development. Organisations that carry out these two activities in India have already progressed up the differentiation continuum explained in the Christensen model. These organisations would ideally look for differentiating through price. Primary research shows based on this advantage, organisations are willing to expand into Coimbatore.

The same holds good for BPO / ITES organisations wherein focus was found more in the back office processing and customer interaction services (call centers). Companies in back office processing would find Coimbatore ideal for cost-effective operations.

1.4.1.7 Demand forecast for the IT Park

The data in table below, represents a sample among the universe of software organizations in India. The representative data are those of organizations keen on looking at Coimbatore in their expansion agenda. The data represent the approximate manpower expansion as indicated to PwC by the respective heads of department.

In our estimate, Coimbatore would be in a position to create an employment potential of around 14000 people. The forecast has been arrived at after considering potential of the Top 10 cities³ where organisations could ideally look for expanding operations.

A sensitivity analysis has been conducted under three scenarios. Scenario 1 represents optimistic forecast, essentially achievement of 100 % growth estimates. Scenario 2 represents most likely forecast representing achievement of 85 % of the targeted growth and finally, the conservative scenario wherein estimates are based on 60 % of the forecast growth.

	Optimistic	Most likely	Conservative
Summary of jobs created in the due course of expansion of major corporates	165058	125727	73464
Potential for Coimbatore (number of FTEs ⁴)	18340	13970	8163
Space requirement (assumed at 100 sq. ft per person)	1833978	1396967	816267

Exhibit 0-26 Summary of expansion estimates of large corporates

Source: PwC Analysis

Figures for the year 2008

³ Top ten cities as classified are Mumbai, Chennai, Chandigarh, Bangalore, Mysore, Pune, Hyderabad, Coimbatore, NCR and Trivandrum based on recent research publications.

⁴ FTEs –Full time employees.

1.4.1.8 Comparison of Existing Quality IT space

The current IT Space available in the knowledge triad is represented as follows :

Project	Location	Vacant space in sq. ft.	Description
TIDEL Park	Chennai	14000	Vacant Space in TIDEL Park
ITPL	Bangalore	400000	Third Phase Of ITPL, AOL among the first takers
Techno Park	Trivandrum	200000	Estimated space available in the Techno Park
Total		614000	

Exhibit 0-27 The vacant space in IT parks presently available

Source: PwC Analysis

Data obtained as per the first hand information

As per research in IT real estate, the following are locations proposed for implementation in the knowledge triad :

Project	Status	Location	Space Sq ft	Description
Krisson Knowledge city	Ongoing & estimated to be complete by 2003	Bangalore	3000000	A Multi-million \$ township promoted by the Krisson Technology venture of US
Cyber Pearl	Ongoing	Hyderabad	250000	Third initiative of the Andhra Government to cater to the expansion requirement of the corporate in Hyderabad
TIDEL Park II	Ongoing	Chennai	500000	Second Phase of TIDEL
KINFRA	Ongoing	Kochi	2000000	A 50 acre Project by KINPIP current under study
Total			5750000	

Exhibit 0-28 The upcoming IT parks in Southern India

Source: PwC Analysis

Though the primary research indicates the likelihood of setting up a unit in an IT park, organisations would still evaluate the prospects of a dedicated facility. However, for our analysis, we have assumed that organisations would ideally opt for a leased space and thereby, save investments on dedicated real estate.

Inference of research study conducted

- More than 71 organisations or 36% of the respondents felt that Coimbatore is an attractive location driven by eventual cost advantages after satisfying functionality reliability & convenience factors
- There are certain improvements identified by the companies researched, to help improve the convenience factor of the location – such as in areas of connectivity, hotel infrastructure, etc.

Given improvements in these two areas Coimbatore has the potential to attract close to 16 medium to large organizations with an employment potential of 14000 people in the year 2008.

1.4.1.9 Revenue potential – Coimbatore

As per research, the global IT industry and ITES are expected to post a turnover of USD 814 Bln and USD 234 Bln respectively. India's export potential as per Mckinsey forecast is estimated to be USD 28 Bln for IT services and USD 21 Bln for BPO / ITES activities.

The knowledge triad (AP, TN and Karnataka) will continue to contribute more than 60 % (based on current export turnover of STPI units) or approximately USD 20 Bln combined by the year 2008.

As per primary research of IT / ITES organisations, PwC estimates an export potential of USD 113 Mln by the year 2008 for Coimbatore IT Park.

Domain model

The domain model explains the concept of identifying new product opportunities to sustain in the marketplace. One of the key opportunities is to establish IT / IT related opportunities in domain areas such as engineering, textiles etc.

The schematic below provides the transition of an existing organisation venturing into new areas leveraging on their domain strength.

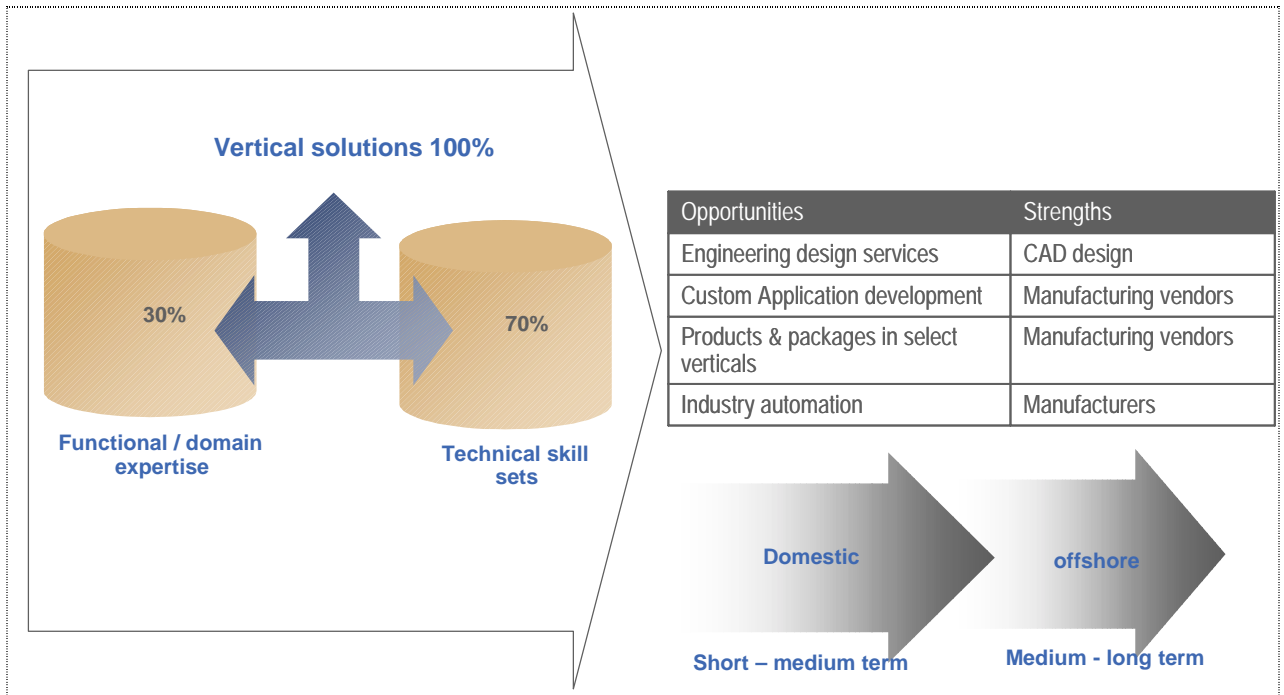


Exhibit 0-29 Domain model

Source: PwC analysis

Reasons for domain lead differentiation

- Industries that utilize the best of breed in manufacturing technology could consider utilising the domain strengths in IT related areas.
- There is a potential for new business entry through strategic alliances with technology partners for tapping green field opportunities.
- Segments such as engineering design that form part of the manufacturing value chain are potential services that could be tapped into currently.

As per our research, Coimbatore’s manufacturing expertise could be translated into potential new business opportunities using IT as a differentiating model. The following value chain explains the transition of the industries in Coimbatore over the last two centuries.

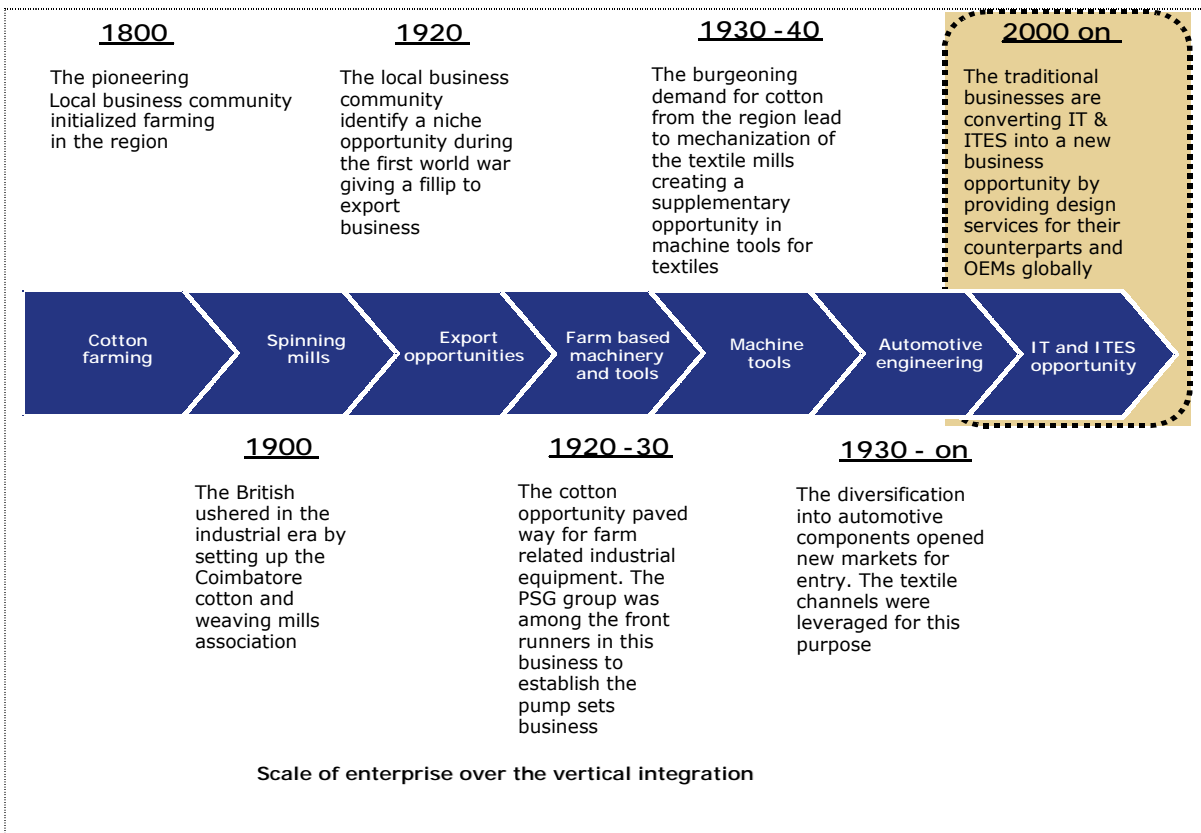


Exhibit 0-30 IT is the next in the logical value chain integration of Coimbatore

Source: Industry interviews, CII & PwC analysis

Coimbatore exemplifies the growth of entrepreneurship. The earliest form of enterprise in Coimbatore was the evolution of a well irrigated system. The irrigation innovation was necessitated by the droughts that the region underwent in extreme climates. The soil conditions were and are still extremely palpable for cotton cultivation. The textile trade witnessed a healthy growth with an entry into the international markets. The developments led to the establishment of the Coimbatore spinning and weaving mills consequently. This was among the first step from the transformation of an agriculture-based business to an industrial based business. Envisioning the growing role of cotton weaving and spinning mills, the farming community moved up the vertical chain to undertake processing of cotton yarn into spun yarn where an attractive export market existed. These pioneering efforts gave way to textile capital goods business that offered a captive market for growth.

Examples of industries that have capitalised on domain expertise are given below :

LMW Group : The LMW group is already a pioneer in employing an IT based business model as a strategic extension of its existing products. LMW supplies engineering and finished components for the global automotive OEMs and suppliers. Their core competency lies in engineering and casting design. These core competencies have been effectively translated over the new platform of utilizing broadband to develop instantaneous prototyping and design for the overseas customer. The overall probability of error and the cost of quality minimises utilizing 3-D modelling from existing packages. Mckinsey estimates the Indian opportunity for engineering design in the region of 1.5-1.6 billion USD or INR 7500 crores by the year 2008. The group enjoys a long standing relationship with its counterparts. This relationship emerges from the groups' expertise in manufacturing and a deep understanding of manufacturing processes that enables them to design custom made prototypes electronically.

ROOTS Industries Ltd. is a leading manufacturer of HORNS in India and the 11th largest Horn Manufacturing Company in the world. Headquartered in Coimbatore - India, ROOTS has been a dominant player in the manufacture of Horns and other products like castings and industrial cleaning machines. Roots Industries Limited has occupied a key position in both international and domestic market as suppliers to leading OEMs and after market. Roots has already made a foray into IT intensive areas. The company uses a range of state-of-the-art tools, for instance Pro E 20001 for solid modelling and hard prototyping, AutoCAD 2000 for drafting. It offers specialised CAD-CAM consultancy service for a range of products and services.

Premier Instruments & Controls Limited (PRICOL) was established in 1974 at Coimbatore, Tamil Nadu, India, and commenced manufacturing operations in 1975 in the precision engineering field of Automotive Instruments. Today, Pricol is the market leader enjoying 53% of the Automotive Instruments market share. Pricol possesses immense domain strengths in automotive engineering.

Elgi Equipments is among the pioneers in the compressors market with an international clientele. The group has made inroad in software developments and owns a software SBU catering to the manufacturing businesses.

Texmo Industries (Texmo) is one of the biggest manufacturers of **Monoblock Pumps, Electric Motors and Openwell Submersibles** in India. Based in Coimbatore, the Company also makes **Special Purpose Machines (SPMs)** and has recently set up a **Software Group**. **Texmo Precision Castings** is promoted by Texmo Industries and exports stainless steel castings to Europe, America and Japan.

KSB Pumps is Indian subsidiary of Klein Schanzlin & Becker (KSB), Germany, and one of the largest manufacturer and seller of pumps and valves in India. The company is mainly engaged in manufacture of power driven pumps and industrial valves. The company has grown geographically and owns plants at Pune, Sinnar and Coimbatore since its first plant, which was set up at Pimpri, in Pune. in 1960. The company's own foundry plant is at Ahmednagar in Maharashtra. The company's Coimbatore plant, which was set up in technical collaboration with Velan, Canada is into manufacture of submersible pumps and valves.

Analysis of findings

As per our interactions with select company representatives listed below, the following are the findings with respect to the IT preparedness in future IT entry strategies.

Company	Expansion strategy	Infrastructure Support	Implication
LMW	Extension of service through IT	Readily available but looking for an independent expansion	Recruitment plans of 250 people over the next year and looking for an independent space
Elgi Group	Software related to Domain	Independent unit in Chennai	Already own a captive facility in Chennai
Bannari Amman Group	Own a InfoTech division start-up that functions purely on non domain software business.	Provided by group organization	Considering a captive IT unit to leverage domain factors
Sakthi Group	Owens SBU software business	Readily available	Might require new space if considering a BPO opportunity
KGISL	Owens an SBU in software solutions	Readily available	Already available expansion space
CPC Ltd	Utilize IT for In house operations	Readily available	-
Texmo Industries (Part of the Aqua Group)	Extension of services thru IT for in house clients	Readily available	-
Roots Industries	Extension of services thru IT	Already available	Looking out for further space

Exhibit 0-31 Findings from the industry interaction in Coimbatore

Source: Industry interviews

Inference of the domain model

- The domain model gives the opportunity for vertical and functionality based IT/ITES operations for instance digitization of drawings, engineering design.
- The Indian opportunity for such services is close to USD 1.5 Bln by the year 2008 as per Mckinsey estimates.
- PwC estimates that the potential from domain model applied in Coimbatore based companies could result in a turnover of around USD 40- 60 mln by the year 2008.
- Some of the key challenges facing this transition are:
 - Lack of an appropriate roadmap for these services
 - Squeezed margins leading to focus on the existing businesses
- The roadmap requirements are to fulfil the above, create and develop a niche in domain focussed IT opportunity.

Coimbatore – A review

Coimbatore has been evaluated based on perception and on factual parameters. The perceptual parameters and related analysis has been presented in the previous section. However, it is equally important to delve upon the factual analysis of critical success factors. The availability of critical success factors is vital to determine the operationalisation of an IT Park.

In this chapter, a factual analysis on the critical success factors with respect to Coimbatore has been presented.

1.5 Overview

Coimbatore is strategically located to be proximate to the metropolis in the Knowledge Triad – namely, Chennai (8 hours) and Bangalore (8 hours).

Coimbatore spans an end-to-end distance of 15 km. Metalled roads connecting both ends of the city measure a total of 0.44km/sq km. The city's outskirts present a potential to expand real estate seamlessly upto the borders of Kerala on the south west and interiors towards Tirupur on the south east ends.



Exhibit 0-1 City sketch

Source: mapsofindia.com

As per estimates of the census survey 2001, Coimbatore has a population of around 1.2 million with close to 80% literacy among the populace.

Traditionally, Coimbatore has a recall as a strong industrial base predominantly in the automotive components, textiles, pumpsets businesses. The trade in Coimbatore accounts for a total annual turnover of Rs. 16000 crores. The city's history and development and the existing industrial base suggests enterprise among the local business communities.

Coimbatore has a thriving market in the automotive components market. The market share of Coimbatore in automotive components is around 25% -30% out of the total Indian automotive component business. The Small and Medium Enterprises (SMEs) caters to supply requirements of Indian automotive OEMs such as MUL and TATA.

Coimbatore also is home to pumpset manufacturers. About 60 % of the water pumps and 40 % of the motors used in India are made in Coimbatore.

Some of these products manufactured from Coimbatore find prominence in the international markets of United States, Europe and the Far East.

Prior to Coimbatore emerging as an industrial base, agriculture played a vital role in the development of both domestic and export markets. Coimbatore has since emerged as an industrial hub following the agriculture boom, which enhanced trade in the region.

1.6 Resources capability of Coimbatore

Human resources

Apart from an existing business environment, Coimbatore has a substantial pool of manpower resources well qualified for engineering and computer software related professions. As per figures of the Dept of Economics and Statistics, annually 20,154 competent engineers graduate from Coimbatore universities and 28,823 from non-engineering backgrounds graduate from the institutions of Coimbatore.

Coimbatore is host to a number of education portals. Industry played an important role in the growth of these institutions. To fulfil the industrial requirement for talent, to meet their expansion plans, education and training was taken up as a priority area by some of the key business houses. The PSG group were among the frontrunners, by establishing the PSG College of Technology. The PSG College of Technology is among the recognised colleges in India.

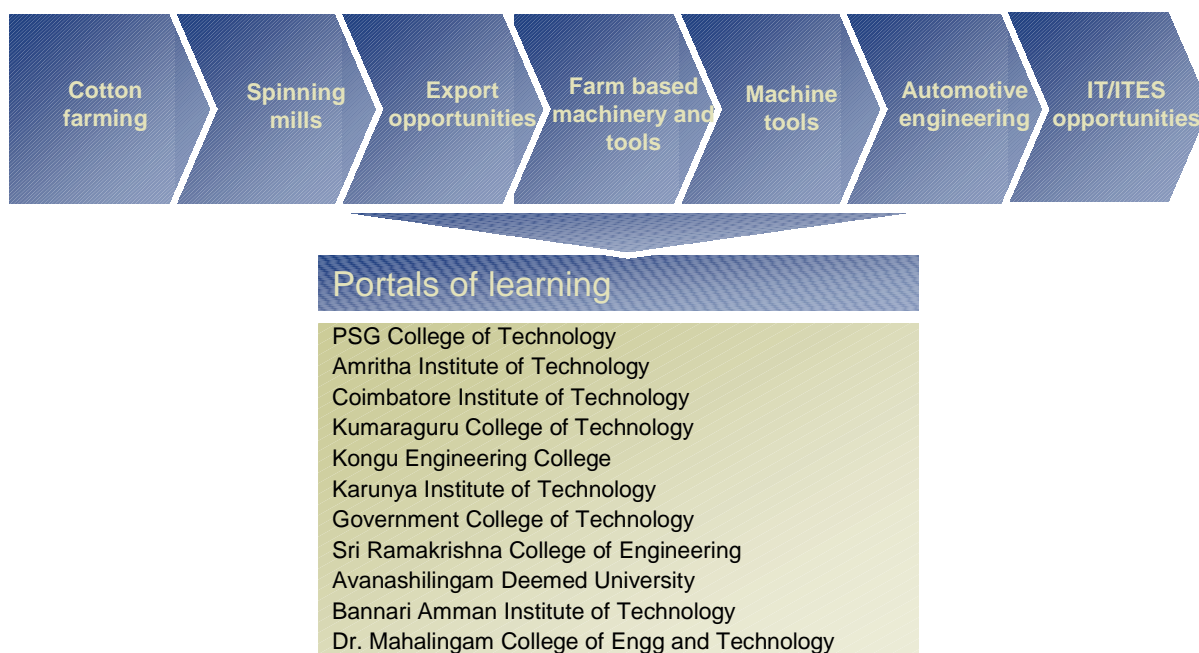


Exhibit 0-2 The Scale up model of the enterprises in Coimbatore

Source: PwC Analysis

Coimbatore gradually rose to being regarded as among the foremost learning centres in Tamil Nadu.

Some of the prominent colleges of Coimbatore are given below:

Institution	Description
Bharathiar University	One of the three Universities present in Coimbatore, which runs diverse courses on its campus.
Tamilnadu Agricultural University	Is one of the best institutions of its kind in South Asia. The sugarcane research institute is of international repute.
Coimbatore Institute of Technology, Coimbatore	Coimbatore Institute of Technology (CIT) is a Government-aided private engineering college, founded in 1956.
Government College of Technology, Coimbatore	Government College of Technology (GCT) is a state funded co-educational autonomous engineering institution affiliated to Bharathiar University. GCT offers both undergraduate and Postgraduate level courses in engineering fields.

Institution	Description
PSG College of Technology, Coimbatore	The institution offers doctoral programmes in ten disciplines and M.Phil. programmes in four disciplines. The institution has 17 departments and student strength of 4100 with the present annual intake of around 1400 students. It has been continuing to evolve innovative applications of technology in addition to providing engineering education.
Amrita Institute of Technology, Coimbatore	Amrita Institute of Technology and Science (AITEC) was conceived as the grooming ground for the future engineering and IT professionals of the country. It is managed by Mata Amritanandamayi Math
Bannari Amman Institute of Technology, Sathyamangalam	The Bannari group promoted institution provides engineering courses with the best infrastructure facilities
Dr Mahalingam College of Engg & Technology, Pollachi	Dr. Mahalingam College of Engineering & Technology (MCET), Pollachi, is a Private, Self-Financing, Co-educational Engineering College established in the year 1998, to cater to the needs of students aspiring to pursue education in the field of Engineering & Technology. The College is approved by All India Council for Technical Education, New Delhi, Government of Tamilnadu and affiliated to Anna University, Chennai
Karunya Institute of Technology, Coimbatore	Karunya Institute of Technology & Sciences, originally Karunya Institute of Technology, was founded in 1986.
Kumaraguru College of Technology, Coimbatore	Kumaraguru College of Technology (KCT), Coimbatore is a private co-educational engineering college started in 1984 under the auspices of Ramanandha Adigalar Foundation, a charitable educational trust of Sakthi Group.

Exhibit 0-3 List of prominent colleges in Coimbatore

Source: Published resources

Growth estimates of manpower resources

Taking the present growth trends into account, the forecast for the year 2008 is around 38625 graduates from commerce streams and 35705 from engineering streams. The forecast does not take into account, the graduates from Medical and Law Streams.

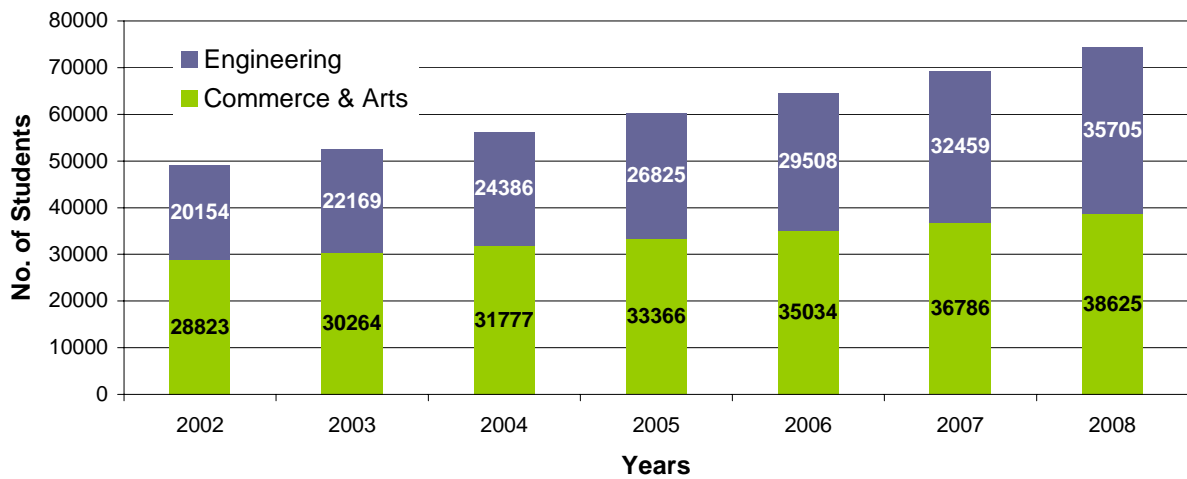


Exhibit 0-4 Forecast graduates from the engineering & commerce colleges in Coimbatore

Source: Department of Economic & Statistics

Power

Coimbatore is currently faced with a deficit situation in Power. A sample Transmission & Distribution (T&D) analysis of the State Electricity Board (SEB) reveals this. The deficit in power arises from the T&D losses.

Districts	Energy injected by generator/ Interstate (MU)	Energy fed to HT bulk and lumped cons at SS end of 11/22 KV (MU)	Transmission & transformer losses (MU)	T&D loss
Trichy	219.61	193.96	25.65	11.68%
Madurai	338.77	303.15	35.63	10.52%
Coimbatore	227.39	199.99	27.40	12.05%
Erode	341.09	325.85	15.25	4.47%
Vellore	67.48	61.00	6.48	9.60%
Tirunelveli	338.93	326.95	11.98	3.53%
Villupuram	137.41	130.95	6.47	4.71%
TOTAL	1670.67	1541.83	128.85	7.71%

Exhibit 0-5 Sample analysis - power situation in Coimbatore

Source: TNEB annual budget

To overcome this problem, most of the industrialists own captive power generation units that fulfil the balance power requirement. As per estimates of the Department of Economics and Statistics, approximately 43% of the requirement originates from industries.

As per industry practices, an IT Park should support power feeder stations located within the premises by directly acquiring power from the state grid. This also should be ideally backed up with DG sets catering to at least 72 hours of continuous power supply.

Telecom Connectivity

Coimbatore is the closest location to Kochi, an international landing hub. Trivandrum already enjoys cost effective connectivity, the proximity to Kochi being the main reason. Kochi is 5 hours travel by rail / road from Coimbatore. Given the distances, the cost of establishing connectivity to Kochi would be at economical rates, which would in turn be passed on to the end user.

Coimbatore is also closer to the second international landing hub, Chennai, which is an 8-hour travel.

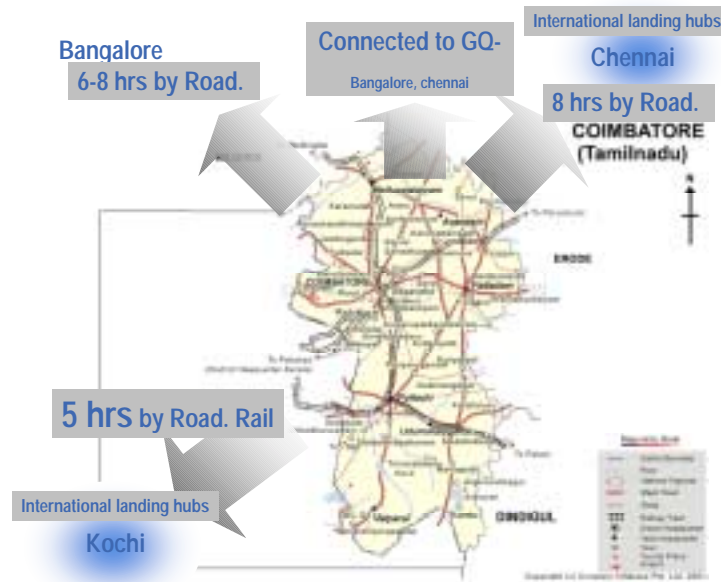


Exhibit 0-6 Geographic connectivity of Coimbatore to other places

Source: *mapsofindia.com & PwC Analysis*

Surface transport

Railheads and robust roads network the cities with the major ports of Chennai, Tuticorin and Kochi. An extensive network of roadways spanning 10000 Km in and around the state enables inter-state commerce. The following table gives a breakout of the composition of roads in Coimbatore. The roads are well maintained and offer smooth rides and economy in the fuel.

	Town Panchayat	National Highways	Corporation	SH, forest roads, panchayat union
Surfaced road	708.34	330.20	1091.91	10133.72
Concrete	178.64	0.00	122.24	30.90
Bituminous	404.04	330.20	925.96	9972.27
Water bound Mechanism	125.70	0.00	43.71	130.55
Unsurfaced road	670.36	0.00	79.61	230.00
Grand total	1378.74	330.20	1171.52	10363.72

Exhibit 0-7 Length of road network in the district of Coimbatore

Source: Department of Economics and Statistics

Length in kms

The district has an extensive rail network interconnecting the major routes to Bangalore, Chennai and Kochi.

	Broad Gauge	Meter Gauge	Total in Kms
Route length	130.33	85.00	215.33
Track length	280.0	85.00	365.00
Number of stations	16	3	19

Exhibit 0-8 Length of railhead network in the district of Coimbatore

Source: Department of Economics and Statistics

Length in kms

Air connectivity

As per airport authorities, the annual passenger traffic at Coimbatore (embarking and disembarking) is in the region of 108 million passengers every year with around 40 million embarking, 40 million disembarking and another 28 million by means of transit. This could be much higher if the infrastructure is upgraded to suit business needs. The key issues are related to flight entry and exit timings. It is imperative that flight timings be adjusted according to the business meeting hours with an entry into the city aboard a morning flight and an exit from the city in a post-lunch flight. However, given the current infrastructure, the timings of flight entry and exit do not allow for this luxury to manage time comfortably.

A preliminary glance at the domestic flight schedules of the Jet Airways and Indian Airlines reveal that the current flight travel is not conducive for business visits - for instance conferences, tradeshows, corporate meeting.

Business travel at present has to be suited according to these schedules available if the mode is air travel.

Location	Airways	Arrival in	Departure	Frequency	Comments
		CBE	from CBE		
Bangalore	Jet	1955	2030	Daily	Passengers forced to stay overnight
Calicut	IA	1330	1110	Daily	Middle of the day and forces passengers to stay overnight
Cochin	IA	0410	1640	Mon Wed Fri	International Flight - Sharjah - Cochin - Coimbatore
Chennai	IA	0740	0810	Tue Thu Sat	Forces passengers to stay an additional day as no flights in the evening back to Chennai
	IA	1555	0445	Mon Wed Fri	
	Jet	1220	1255	Daily	
Delhi / Mumbai	IA	1030	1410	Daily	Middle of the day and forces passengers to stay overnight
	Jet	1400	1440	Daily	

Exhibit 0-9 Present schedule of flights for Coimbatore

Source: Jet Airways, Indian Airlines

Healthcare

Health care in Coimbatore has grown primarily due to the social investments of the large corporate groups based out of Coimbatore. Some relevant statistics to healthcare have been presented in the table below.

Classification	Allopathy	Siddha	Homeo	Total
Hospitals	103	1	1	105
Dispensaries	32	2	-	34
Primary health centers	68	25	-	93
Health sub center	469	-	-	469
Bed strength	3559	25	10	3594
No. of Doctors	607	29	1	637
No. of nurses	1872	3	-	1875

Exhibit 0-10 The healthcare scenario of Coimbatore

Source: Economic and Statistics Department of government

Given adequate training in methodology and processes, the current strength of doctors and nurses could improve since Coimbatore is already a host to few learning centres imparting knowledge in medicine.

There are institutions that follow benchmark quality practices in healthcare with ISO certification.

Hospitals	Specialization
Kovai Medical Center and Hospital (KMCH)	KMCH is one of the prominent hospitals in Coimbatore specializing in General Medicine, Cardiology, Dermatology, Endocrinology, Gastroenterology, Geriatric Medicine, Haematology and Haemato Oncology, Nephrology, Neurology, Laparoscopic Surgery, ENT, Head Neck Surgery, Neuro Surgery, Obstetrics Gynaecology, Orthopaedics, Emergency & Trauma Care, Paediatrics Paediatric Surgery, Plastic & Cosmetic Surgery, Urology and Rheumatology.

Hospitals	Specialization
KG Hospital	K.G. Hospital is a 300-bed super specialty hospital delivering quality health care service in Coimbatore, Southern India. It is the fourth in the country to get an ISO 9002 Certification.
The Eye Foundation & Lasik Centre (India) Pvt. Ltd.	The Eye Foundation is equipped with state of the art ophthalmic equipment on par with the best available anywhere in the world. The young, well trained, highly motivated team of Ophthalmologists, Optometrists and other ancillary staff provide the latest in Eye Care for the entire gamut of eye diseases at a reasonable cost.
G.Kuppuswamy Naidu Memorial Hospital	Paediatric Surgery, Cardio -Thoracic Surgery, Cancer Treatment, Nuclear Medicine, Maternity and Gynaecology.
Lotus Eye Care Hospital	India's first Esiris custom Lasik Legacy 20000. Phaco with Intra Ocular Lens : First to introduce in this region.
PSG Hospital	The services available in PSG hospitals are Medicine, Cardiology, Pulmonology, Nephrology, Psychiatry, Surgery, Paediatric Surgery, orthopaedics, obstetrics and gynaecology, paediatrics, lung care, kidney care, diabetic care, ENT, Eye, Dental, audiometry, Drug and alcohol de-addition, physiotherapy, dermatology, radiology, scan, Echo colour doppler, Cardiac care centre, sterilization, colonoscopy, endoscopy, allergy test, urology, neuro surgery, neuro medicine. The hospital also provides 24 hrs service for accident, trauma, ICCU, Casualty, neurosurgery, 3D spiral CT scan, blood bank, pharmacy, canteen, burns, poisoning, fracture, delivery, child care, lab, ambulance.

Other prominent hospitals include Arya Vaidya Chikitsalayam & Research Institute, Ramakrishna Hospitals, Aravind Eye Hospital, Ganga Hospital, CMC, Sankara Hospital, GEM Hospital, United Hospital.

Banking

Some of the leading multinationals such as Citibank and HSBC have opened branches in Coimbatore. The rationale is to leverage their global presence to service manufacturers and suppliers involved in overseas trade.

As per a press release, HSBC's Chief Executive Officer in India, said: "Coimbatore is an upcoming city in the Southern Indian region and we are happy that we have been allowed by the Reserve Bank of India to open a branch here. Coimbatore has long had contacts with the external world and its citizens expect world-class financial products and services. HSBC is proud to showcase our quality service range at Coimbatore, our thirtieth branch in India."

Leading domestic banks such as HDFC, IDBI, ICICI already have existing branches operating out of Coimbatore.

Primary education and schooling

The following table represents Coimbatore's strengths in primary education. The main medium for the schools is English.

Sl. No	Category	No. of institutions	Strength
1.	Pre primary nursery schools	585	38523
2.	Primary schools	1459	220819
3.	Middle schools	229	127819
4.	High schools	136	68249
5.	Higher secondary schools	132	168673
6.	Central schools	3	2873
7.	Matriculation / Hr sec schools	276	155689
8.	Anglo Indian school	2	135
	Total	2822	782780

Exhibit 0-11 The school infrastructure and student strength of Coimbatore

Source: Department of Economic and Statistics

Associations and support organizations

- **Coimbatore District Small Industries Association (CODISSIA)**

CODISSIA was set up with the objective of providing advisory services on business issues covering Income Tax, Power, ISO certification, Guidance for ISO 9000 Certification, Sales Tax, Central Excise, Licensing, Industrial sheds, Approvals from various agencies.

The association has set up a recent trade fair complex – the COINTEC. COINTEC provides the necessary infrastructure support for the purposes of organizing trade events and fairs.

- **South India textile research association (SITRA)**

SITRA was set to support technology and research in fibre, spinning and to conduct investigations to improve the quality and efficiency of the handloom industry. SITRA was set up in the early 50s to support the local spinning industry

Some of the services of SITRA are :

- **Consultation Services** : It is a highly specialised function of SITRA taking into account the needs and requirements of each individual mill. Besides implementation of management techniques and studies on adhoc problems in individual mills.
- **Testing Services** : Testing the quality of material at different stages of processing from fibre to fabric and evaluation of processing performance by the application of physical, chemical and processing tests from an integral part of the services rendered by SITRA to its members.
- **Training Services** : SITRA offers a wide range of training programmes periodically to fulfil specific and general requirements of member mills for various levels of management cadre and operatives. Such training programmes are organised as a tool to translate SITRA's current R&D activities and their outcomes into real life practical situations.

SIEMA (Southern India Engineering Manufacturers Association)

SIEMA was founded in 1952, with the sole aim of representing and protecting the interests of Small, Medium and Large Scale Engineering Industries of this Region. SIEMA was founded in the year 1952 with only 20 members with a current strength of more than 200 members. Significant achievement of SIEMA is the awareness created amongst its members regarding Quality Control. The total number of BIS (bureau of Indian standards) Licensees in and around Coimbatore are more than 300 which is the largest in the Country.

SIMA (Southern India Mill's Association)

SIMA was founded in 1933, represents the interests of Small, Medium and Large scale textile and spinning mills.

It started with 11 members growing to 360 textile mills spread over the states of Tamilnadu, Karnataka, Kerala, Andhra Pradesh, Gujarat, Madhya Pradesh, Maharashtra, and the Union Territory of Pondicherry.

Indian Chamber of Commerce & Industry

ICCI has been in the forefront in safeguarding the interest of trade and industry of this region. ICCI was founded in the year 1929 and has about 1,500 members from the industry , which includes 40 corporates and about 100 associations of this region.

Other Business Support

Other business support is explained as services required for a company right from inception. These are incorporation of a company, facilitating business through trade convention, enabling business entertainment.

Coimbatore has a good concentration of high end, Industrial and Scientific R & D Centres of Excellence in the areas of textile, engineering, biotechnology and medicine. Notable among them are South India Textile Research Association (SITRA), Small Industries Testing and Research Centre (SITARC), Institute of Forest Genetics and Tree Breeding (IFGTB), Sugarcane Research Institute, Rice Research Institute, Pasteur Institute, Cotton Research Institute

1.6.1.1 Registrar of Companies (ROC), Coimbatore

ROC functions as registry of records, relating to the companies registered, which are available for inspection by members of public on payment of the prescribed fee. The Central Government exercises administrative control over these offices through the respective Regional Directors.

ROC has an office in Coimbatore, making it the only one in the country to be situated outside the state capital.

1.6.1.2 Small Industries Development Bank of India (SIDBI)

SIDBI is the principal financial institution for promotion, financing and development of industries in the small-scale sector. It also co-ordinates the functions of other institutions engaged in similar activities.

SIDBI has an office in Coimbatore.

SIDBI has funded the Rs. 12 crore CODISSIA complex.

1.6.1.3 Trade & convention centre

Coimbatore provides a trade friendly environment. To support trade, CODISSIA Coimbatore district small industries association has set up the Codissia Intec trade fair complex. Some of the salient features of this trade centre are :

Campus Area	40 acres (or) 161,800 sq.mtrs.
Exhibition Area	
Built up	10,250 sq.mtrs.
open Area	50,000 sq.mtrs.
Amenities Area	3,250 sq.mtrs.

Power, parking and water facilities are adequately provided for meeting peak demand

1.6.1.4 Recreation and Week end getaways

Coimbatore Golf club: The Coimbatore golf club is located in Chettipalayam 15- 20 kilometres. It is a world-class 18-hole golf course. The golf course is open all seven days of the week and will serve as a suitable recreation facility for executives and businessmen.

The Perur Temple: Constructed 1500 years ago is well known for its elegantly carved sculptural splendour.

Water theme park : Asia's number one theme park, The Black Thunder, is situated in picturesque surroundings, 45 km away from Coimbatore.

Arsha Vidya Peetam: An Ashram situated about 25 km from the city offers meditation & yoga classes. A calm place for a Sunday, with a tranquil atmosphere – away from the humdrum of city life - for the entire family.

Anamalai Wild Life Sanctuary: Is situated at an altitude of 1500 metres in the Western Ghats 90kms from Coimbatore. It has various kinds of fauna like elephants, gaur, tiger, panther, sloth bear, deer, wild bear, wild dog, porcupine, flying squirrel, jackals, civet cat and birds like rocket tailed drongo, rewhiskered bulbul, black headed oriole, spotted dove, green pigeon etc. The Amaravathi reservoir has a large number of crocodiles.

Top slip: It is a picturesque locale in the Anamallai Hills. It is about 75 Kms from Coimbatore. One can spot herds of elephants and bisons in this area. It is a beautiful trekking spot.

The Siruvani Dam: Is located 35 kms from the city. The water of Siruvani is well known for its minerals and taste. The panoramic view of the dam and the falls are of enchanting beauty. The city gets its potable water from the dam.

Valparai: It is 100 kms from Coimbatore in Western Ghats & has many tea plantations and is a picnic spot.

Malampuzha Dam: Situated in Kerala state, at a distance of 60 kms from Coimbatore, is a picnic spot with picturesque surrounding. It has a beautiful garden a swimming pool, and an aquarium. A cable car ride is also offered. A world class Ayurvedic health resort is situated here.

Ooty (Udhagamandalam), Coonoor & Kothagiri : Are hill stations situated in the Nilgiris in western ghats. They are 95 kms & 70 kms from Coimbatore. Ooty located at 2286 metres, is known as the Queen of hill stations in the country. The pride of Ooty are the lake with boathouse, the Botanical Gardens, and Dodabetta – the highest peak in the Nilgiris and in South India. Ooty offers a wide choice of hotels for stay.

Coonoor: Boasts of Sim's Park, Law's falls, Dolphins nose and Lamb's neck. Reaching Ooty from Mettupalayam (40 kms from Coimbatore) by the Swiss Rack Rail type Mountain train is an unforgettable experience.

Kodaikanal: Is one of the finest hill stations of the country, reachable by a 4 hours drive.

Mudumalai Wildlife Sanctuary: Situated at 30 kms from Ooty, it is a great picnic spot. One can stay in many of the forest resorts and go for a rendezvous in the night to see elephants & deer – a thrilling experience during the day; the family can have an elephant ride into the forest.

Silent Valley known for its flora and fauna.

Source : CII

Coimbatore - SCOT analysis

Based on the analysis of the resources in Coimbatore, a SCOT table is provided as a snapshot :

Strengths	Opportunities
<ul style="list-style-type: none"> ▪ Telecommunication connectivity ▪ Talented Manpower availability from a pool of colleges in Coimbatore ▪ Vast pool of manpower- Trichy, Madurai ▪ Enterprising community ▪ Salubrious climate ▪ Proximity to hill stations attracting foreign tourist and faculty ▪ Many weekend getaways and international standard golf course 	<ul style="list-style-type: none"> ▪ Extension to IT from manufacturing relatively unexplored ▪ Captive software products for the SME sectors ▪ Internet data centers ▪ Leverage people resource in BPO
Challenges	Threats
<ul style="list-style-type: none"> ▪ Improved air connectivity to important cities ▪ Lack of a hotel infrastructure - Deluxe level 	<ul style="list-style-type: none"> ▪ IT projects already kick started at Thiruvananthapuram and Kochi ▪ Promoting other Tier II towns in neighboring states by their respective government.

Exhibit 0-12 The SCOT analysis

Source: PwC analysis



Location Comparison Study

1.7 Location comparison parameters

Some of the important factors that have been considered for analysing the suitability of location are:

1. Basic statistics
2. Real estate markets
3. Policies & incentives
4. Availability of manpower
5. Telecommunications, ISP connectivity
6. Power
7. Cost of living
8. Cleanliness and pollution
9. Traffic & commuting
10. Healthcare
11. Public transport
12. Surface and air connectivity
13. Career growth & work culture
14. Piped water supply
15. Basic amenities, hospitality and conveniences

Exhibit 0-1 The location comparison parameters

Source: PwC analysis

These factors have been elaborately discussed keeping in mind the cities of Bangalore, Hyderabad and Chennai as the relevant benchmarks.

1.8 Basic statistics

City	Area in Sq.Km.	Population in Millions (approx)
Bangalore	368	6.52
Chennai	174	4.21
Hyderabad	217	3.68
Coimbatore	105	1.20*

Exhibit 0-2 The statistics for comparing Coimbatore

Source: Census of India, 2001,

**shows an estimate*

1.9 Real Estate Markets

Chennai

Among Tier I cities, Chennai has lower real estate values as compared with the other metros.

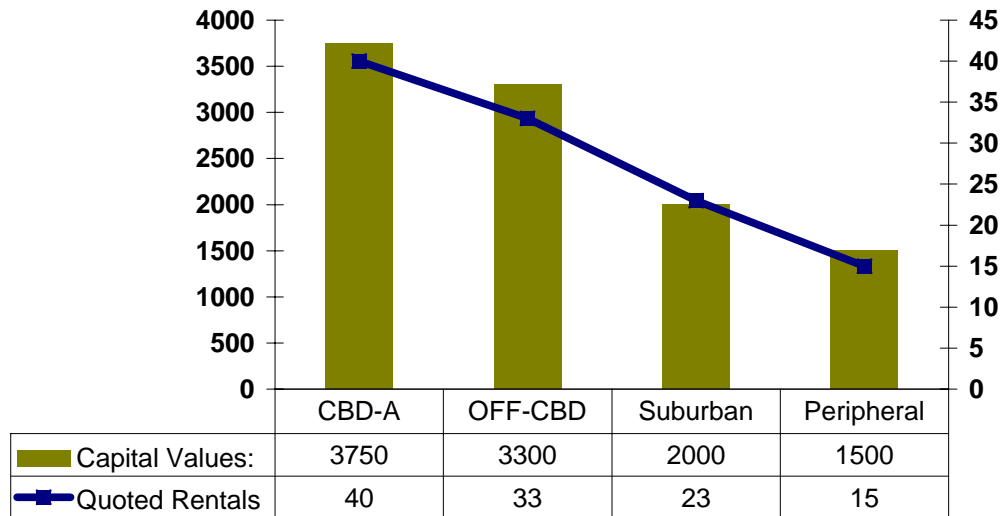


Exhibit 0-3 Chennai real estate and rental markets as on September 2002

Source: Cushmanwakefield research

Figures in INR/Sq ft

Areas covered for the purpose of analysis

Classification	Areas covered
CBD	Anna Salai, Nungambakkam, RK Salai
Off CBD	TTK Road, Cenotaph road
Suburban	Egmore, T.Nagar, Kodambakkam, Guindy, Anna Nagar, Ashok Nagar
Peripheral	Taramani, Perungudi, Madipakkam, Tambaram



Bangalore

The real estate values in Bangalore are high when compared to the other southern cities but they are still much lower than those of Mumbai or Delhi. As the city grows further and as business expands the real estate values are also likely to rise.

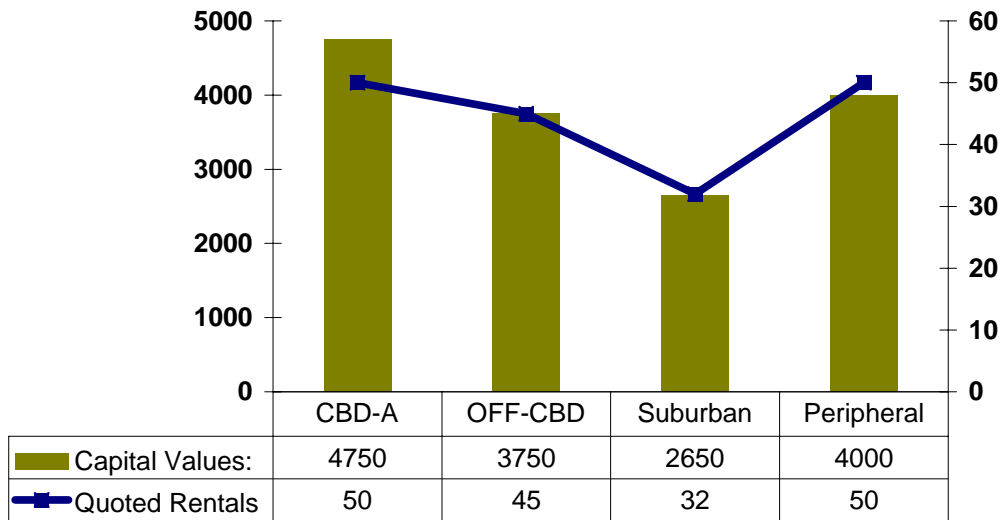


Exhibit 0-4 Bangalore real estate and rental markets as on September 2002

Source: Cushmanwakefield research

Figures in INR/Sq ft

Classification	Areas covered
CBD	MG road, Brigade road
Off CBD	Koramangala
Suburban	JP Nagar, Banashankari, KR Puram,
Peripheral	Electronic city, Whitefield

Coimbatore

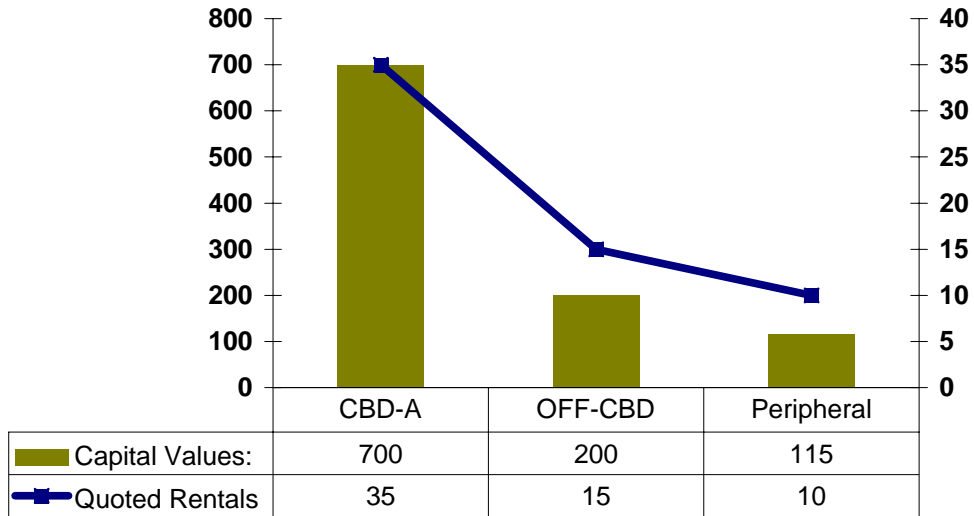


Exhibit 0-5 Coimbatore real estate and rental markets

Source: Real Estate agents in Coimbatore

Figures in INR/Sq ft

As the analysis shows Coimbatore is priced very competitively at around 15 Rs/ sq ft, among the best rates available in southern cities. Among the attractive features that the airport’s proximity to the CBD with travel time of approximately 10-15 minutes

Classification	Areas covered
CBD	Avinashi road
Off CBD	Race course, Gandhipuram, PSG STEP
Peripheral	Peelamedu, Airport



Kochi/Trivandrum

Kerala is beginning to focus on IT and the Techno Park in Trivandrum is one of its efforts to promote IT in the State. Companies like TCS have established offices there. At present there are more than 5000 people working at Techno Park. Kerala is trying to improve its manpower situation in order to provide a suitable IT workforce. Kerala is also establishing IT parks with self-sustained backup facilities.

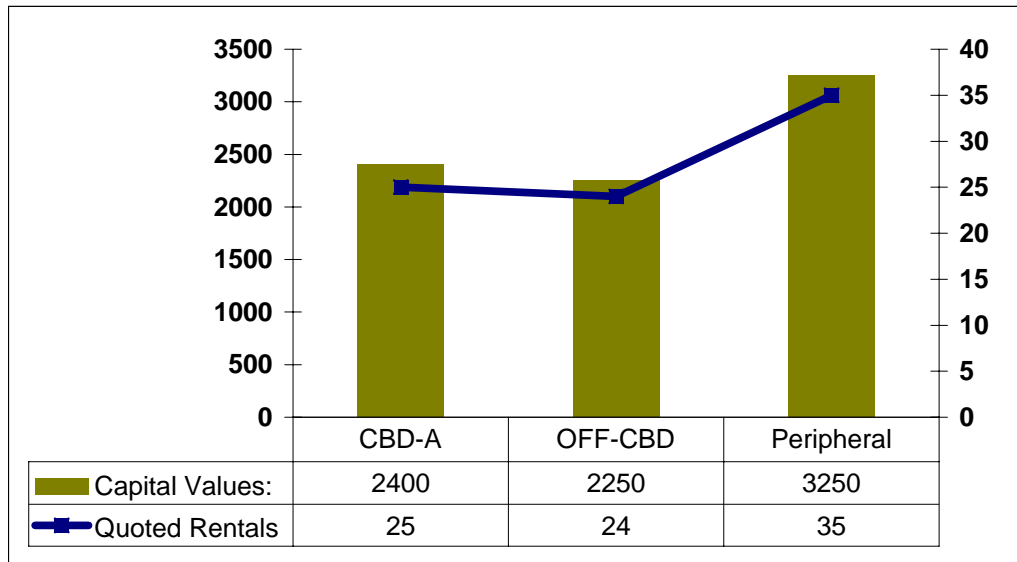


Exhibit 0-6 Kochi Real Estate and rental markets

Source: Real Estate agents in Kochi⁵

Figures in INR / Sq.ft

⁵ Locations such as MG Road, Shanmugam Road are classified as CBD in Kochi. Areas such as Kakinad have been taken as peripheral.



Hyderabad

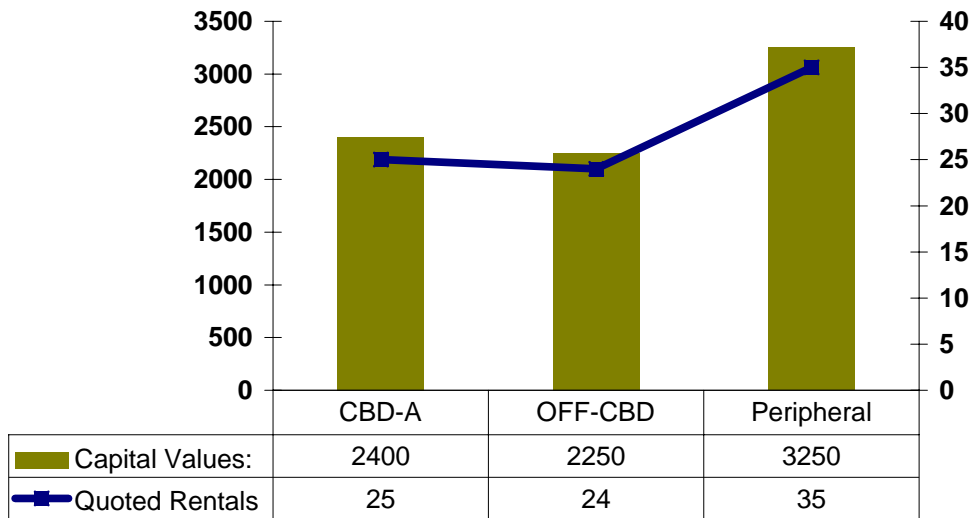


Exhibit 0-7 Hyderabad Real Estate and rental markets as on September 2002

Source: Real estate agencies in Hyderabad

Figures in INR / Sq ft

Among the chosen locations in Hyderabad are areas covering Jubilee Hills, Madhapur HITEC city, Punjagutta. Hyderabad offers real estate at reasonable prices with adequate infrastructure.

Classification	Areas covered
CBD	SP Road, Punjagutta, Begumpet
Off CBD	Banjara Hills
Peripheral	Hitec City, Vanenburg IT Park, Cyber Gateway

1.10 Policies & incentives

The knowledge triad governments are pro-actively institutionalizing measures to attract foreign direct investments (FDIs). Moving towards best practices, governments are laying down policies that are investor friendly. Scripted below are salient features of these policies of the governments in the knowledge triad.

Government of Andhra Pradesh :

Initiatives	Key Points
High Quality Manpower	<p>Training 200,000 to 300,000 students by 2010.</p> <p><u>Two tiered training program:</u></p> <ul style="list-style-type: none"> ➤ First Level – Augment basic English capability. ➤ Second Level – Focus on specialized skills including domain specific skills such as HR training, Payroll processing, insurance processing, GoAP laws etc. <p>Set up Virtual Institute for ITES training.</p> <p>Franchise ITES diploma programs to IT training providers with a well established network of training institutes in order to expedite penetration to smaller towns and to increase training capacity</p>
High Quality Infrastructure	<p>Encourage private real estate developers to develop and reinforce three key aspects viz.</p> <ul style="list-style-type: none"> ➤ office infrastructure ➤ city infrastructure and ➤ residential and commercial infrastructure. <p>Ready availability of high quality office infrastructure serviced with amenities such as UPS, high-speed telecom links, central A.C etc, not just in Hyderabad but also in other important cities.</p> <p>High quality real estate including ready to move in office space and built to suit office space.</p> <p><u>Administrative support –</u></p> <ul style="list-style-type: none"> ➤ Provide clearances within specified time frames and provide best level support for obtaining central level clearances. ➤ Acquire land for the project and undertake all rehabilitation and resettlement activities. <p><u>Asset Based Support –</u></p> <ul style="list-style-type: none"> ➤ Provide Govt. land at concessional rates ➤ Commit/facilitate development of linkage infrastructure. ➤ Foregoing revenue streams such as 50% rebates on registration and transfer of property charges and exemption of segniorage fees ➤ Provide reliable telecom facilities such as high-speed telecommunications links with several levels of built in redundancy, Establish broadband digital networks and satellite communication links. ➤ Provide shared-training infrastructure. ➤ Promote restaurants and food courts. ➤ Improve public transport to and from ITES locations.

Initiatives	Key Points
	<ul style="list-style-type: none"> ➤ Provide road and water facilities at sites of ITES parks. ➤ Provide high quality and affordable housing and schools. ➤ Encourage development of shopping and entertainment complexes.
Easy Accessibility	<p>Expedite the construction of the new international airport to provide international connectivity</p> <p>Influence domestic airlines to link too incoming and outgoing international flights to reduce the travel time to Hyderabad.</p>
Supportive Environment	<p>Have flexi-timing work hours.</p> <p>Permit the employment of women and young persons during night shift subject to provisions of adequate security measures.</p> <p>Operate 24 hrs a day and 365 days a year.</p> <p>Reduce procedures involved in retrenching employees if certain conditions are satisfied.</p> <p>Develop and ITES act to provide specific labor policies and a single interface to the government, which include policies to facilitate the start up process.</p> <p>Develop a data protection and consumer privacy act.</p> <p>Work with the Government of India to simplify the custom bonding procedure.</p>

Exhibit 0-8 Policies and incentives given by Andhra Pradesh

Source: ICT Policy of AP Government.

Government of Tamil Nadu

Incentives	Key Points
Fiscal	<p>Unrestricted movement of capital equipment subject to only sales tax payment.</p> <p>Industry set up anywhere in Tamil Nadu having an investment of –</p> <ul style="list-style-type: none"> ➤ Rs. 50-100 Crores is eligible for a capital subsidy of Rs. 25 lakhs ➤ Rs. 100-200 Crores is eligible for a capital subsidy of Rs. 50 lakhs. ➤ Rs. 200 crores and above is eligible for a capital subsidy of Rs. 100 lakhs. <p>Relaxation of FSI (Floor Space Index) to the extent of 100% will be given in designated IT parks.</p> <p>50% exemption of stamp duty and the registration fee will be given at the time of purchase of land/ building for IT industries.</p> <p>IT parks will be eligible for backward area capital subsidy benefits.</p> <p>Continuous power supply will be provided for low tension units.</p> <p>Special concessions given to companies providing employment opportunities to physically handicapped people.</p>
Administrative	<p>Software companies exempt from the purview of the pollution control act.</p> <p>IT companies will be permitted to self certify that they are maintaining the registers and forms as required.</p>
Physical	<p>Government will ensure that sufficient bandwidth and power is available through alternative locations throughout TN.</p> <p>Motor Vehicles Act has been amended to enable IT companies to make use of privately hired omnibuses to transport employees.</p> <p>There will be an executive authority within a park, which will function as a single window for all statutory clearances within the parks.</p>
Infrastructure	<p>Separate task forces on cyber security, prevention of cyber crimes and IT infrastructure will be established.</p> <p>Knowledge Industry Townships (KITs) will be created in the IT highway.</p>

Incentives	Key Points
Promotional	<p>Potential areas in ITES will be given preference to effectively the exports from TN.</p> <p>Enabling environment for teaching foreign languages will be created so that markets in countries like Germany, Japan and France can be tapped.</p> <p>Facilitate the participation of SMEs (small and medium enterprises) in IT trade shows. A 30% subsidy will be permitted on the stall rent payable for participating SME units with turnover not exceeding Rs. 10 crores.</p> <p>Market base will be enhanced for players in areas like Financial software services, design services etc.</p> <p>Separate policy to attract hardware investments to the state.</p> <p>Availability of a wide English speaking manpower base will be leveraged.</p> <p>Computer education programs will be extended.</p> <p>The government will also try to –</p> <ul style="list-style-type: none"> ➤ Create sector specific infrastructure facilities ➤ Amend legal and regulatory framework. ➤ Create a conducive environment.
Social	<p>Corporate health services, golf courses, international schools and other such needs will be made available.</p>
HR Development	<p>Basic training in computers will be introduced in all schools from the high school level.</p> <p>Encourage It companies to obtain ISO 9000 certification.</p>

Exhibit 0-9 The Policies and Incentives offered by Tamil Nadu Government

Source: IT Policy of TN Government.

Government of Karnataka:

Incentives	Key Points
Concession in stamp duty and registration charges	Exemption from payment of stamp duty and registration charges for New BPO companies - upto 50%. Tiny and small scale industries creating additional jobs in the BPO sector - upto 100%. Mega projects in the BPO sector which invest more than Rs 50 crores or provide continuous employment for two years to over 5000 persons in Bangalore or 100 persons in cities like Mysore, Udipi & Hubli or 500 persons in other parts of the state – upto 100%
Fiscal	BPO industry exempt from payment of Entry tax on all capital goods required for a project upto 3 years.
Rebates	Mega Industries which establish their operation outside the limits of Bangalore Metropolitan Regional Development Authority (BMRDA) will be provided a one time investment subsidy linked with their employment generation.
Waiver of Conversion fee	BPO units employing 100 persons and above outside the BMRDA limits are exempt from payment of conversion fee w.r.t converting agricultural land to non agricultural purposes upto 0.3 acres for every 100 persons employed. Tiny/SSI in the BPO sector are exempt from payment of land conversion fee upto 2 acres.
Transport	The government will facilitate the entry of large BPO companies into contracts with state owned road transport corporations and BMTC to provide suitable transportation for their employees.
Relaxation	Simplifying the regulatory framework by reducing procedural requirements.
Labor laws	Simplifying the existing labor laws and removing certain barriers such as employment of women at night, flexi working hours and weekends off.

Exhibit 0-10 The Policies and Incentives offered by Karnataka Government.

Source: *IT Policies of Karnataka Government*



1.11 Availability of Manpower

Tamil Nadu is home to some of the best engineering colleges of India. Some of the prominent colleges of India are located in the south. The total strength from engineering streams currently would be in the region of around 1.2 lac annually. As per forecast, by 2008 the total graduate strength from the knowledge triad would be around 2 lac engineering graduates.

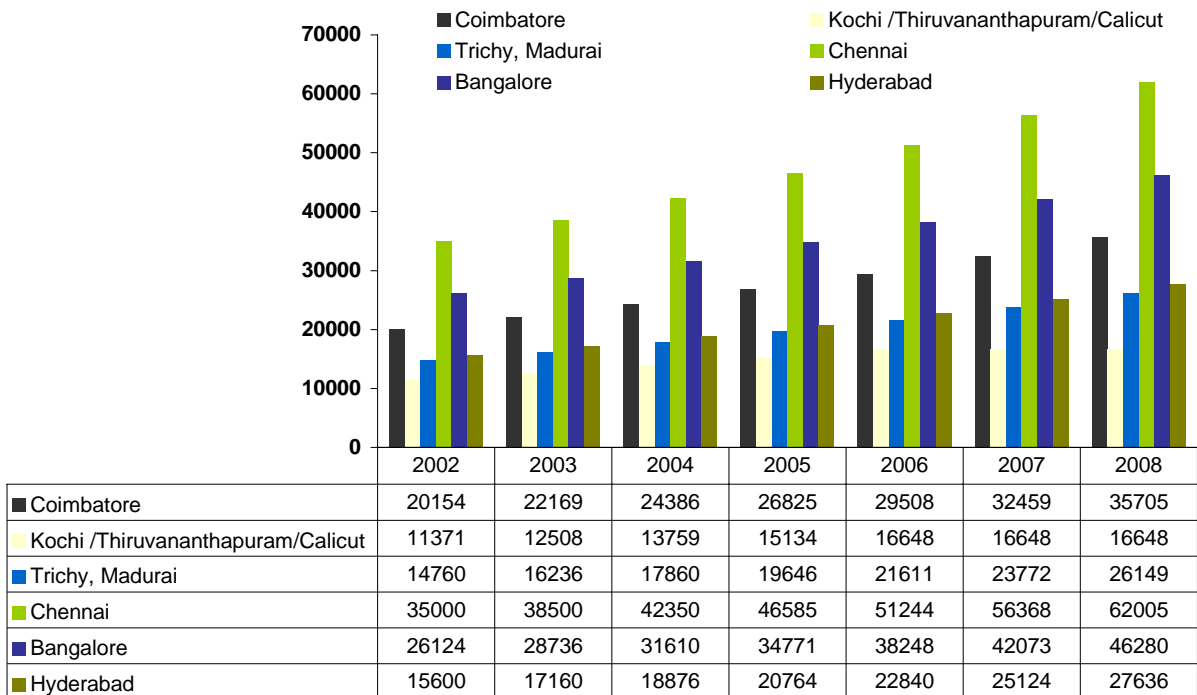


Exhibit 0-11 Engineering professionals head count

Source: AICTE Industry references, PwC analysis



In the commerce streams, the current strength is estimated around 2 lac graduates growing upto 3 lac graduates by the year 2008.

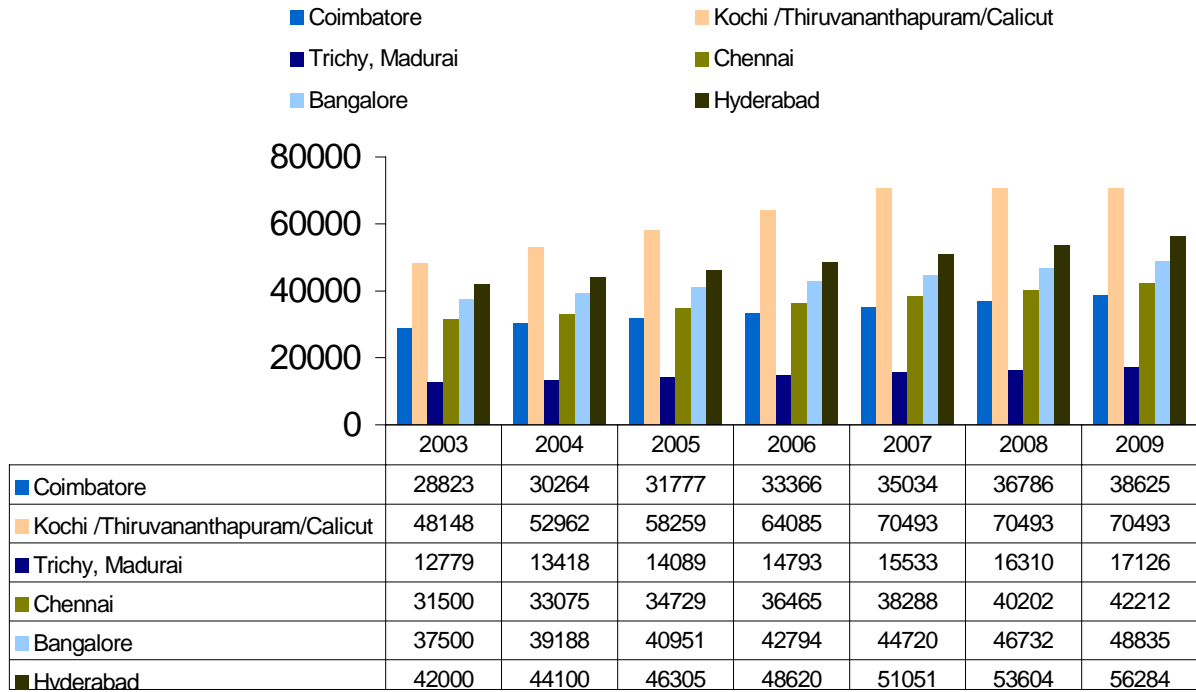


Exhibit 0-12 Graduate head count

Source: AICTE Industry references, PwC analysis

1.12 Telecommunications, ISP connectivity

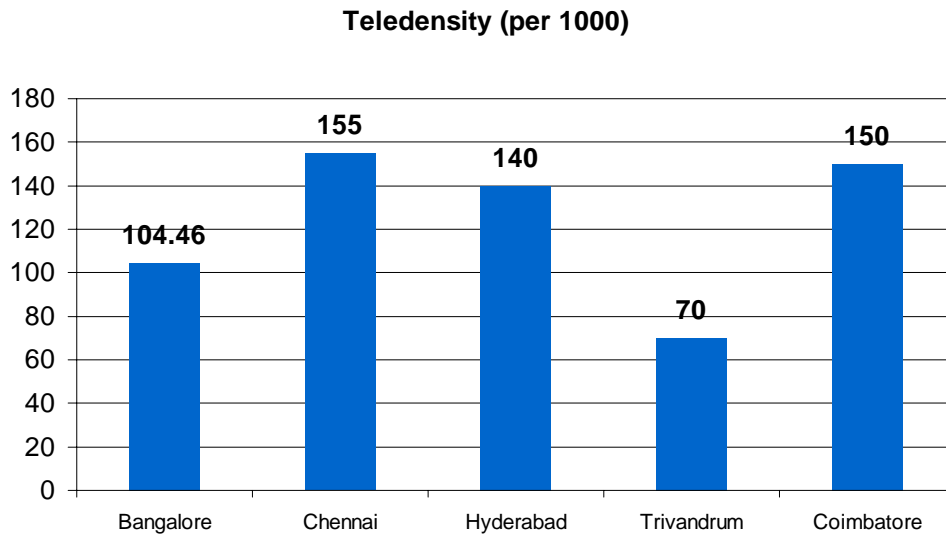


Exhibit 0-13 Tele density – telephone connections per 1000 persons

Source: Business Today

The above table depicts the Tele-density across Bangalore, Chennai, Hyderabad, Trivandrum & Coimbatore. It can be seen from the above table that Coimbatore comes second only to Chennai in terms of tele-density, with a marginal difference.

Internet Tariffs:

Sr. No	Speed	Registration Charge (in Rs.)	Installation Charge (Rs. in Lakhs)	Annual tariff (Rs in Lakhs) for different centres as detailed below in the table		
				A	B	C
1	64 kbps	10,000	1.25	2.3	4.1	6.8
2	128 kbps	10,000	1.25	4.2	7.4	12.3
3	192 kbps	10,000	1.25	5.9	10.2	17.0
4	256 kbps	10,000	1.25	7.3	12.7	21.1
5	384 kbps	10,000	1.25	9.4	16.4	27.3
6	512 kbps	10,000	1.25	11.4	19.6	32.7
7	768 kbps	10,000	1.25	15.1	26.2	43.6
8	1 Mbps	10,000	1.25	18.9	32.7	54.5
9	2 Mbps	10,000	1.25	26.0	45.0	75.0

Exhibit 0-14 Different tariff across different cities.

A- Mumbai and Cochin for Cable circuit.

B- All other VSNL centers for cable circuit except A above, which are connected to the cable, heads through terrestrial link.

C- For Satellite circuit, from VSNL centers having Standard-A Antenna.

Source: VSNL

The emergence of new telecom players such as Tata Telecom, BATATA (an alliance between AT&T, Tata and Birla groups) is also likely to reduce the tariffs. This is because competition between these new players and the established ones will lead to price reductions. It will also result in an improvement in the quality of service provided and an increase in bandwidths available.

Another development, which is likely to cause a change in the Tariff rates, is the establishment of an optical fibre Telecom link between Chennai, Bangalore and Hyderabad. The PowerGrid Corporation of India Ltd (PGCIL), which is diversifying into telecom, is contemplating such a move. Such a link already exists between Ooty and Bangalore and the project is expected to be completed by 2003. PGCIL is also planning to develop a telecom backbone network of about 14,000 km in the country involving an investment of Rs 1,100 crores. The network, to be completed in 2-3 years, will connect over 56 cities including all the metros, major cities and towns.

Satyam Infoway (Sify) and VSNL recently announced the single largest contract for international bandwidth capacity placed in India. The 155 Mbps will be made available between Mumbai and the US through a half circuit IPLC. This will enable Sify to broaden its broadband initiatives and also provide additional quality of service guarantees. Connectivity has also been established between Bharti's submarine cable and Sify's facility. With the launch of the Bharti's new cable the bandwidth rates in the country are expected to drop by about 50 to 60 per cent.

The tariffs in Mumbai and Kochi are considerably less than in other cities. However this is likely to change with the introduction of the submarine cable line from Singapore to Chennai, which is provided by Singtel and has a capacity measured in Terabytes per sec. The i2i cable network, which is a product of Singtel's collaboration with Bharti, is thought to be the world's largest. It is linked to Singtel's extensive network in the Asia Pacific region and will enhance telecommunications connectivity between the Indian Subcontinent and East Asia. The First phase will link Chennai-Bangalore-Mumbai, Chennai-Hyderabad-Mumbai and Mumbai-Delhi. The i2i network would have gateways in Bangalore, Chennai, Bhopal, Calcutta, Delhi, Hyderabad and Mumbai that would allow customers to set up POPs (points of presence) in these cities via Bharti's domestic links. The 8.4 Terabits cable system will be able to support 130 million dial up connections simultaneously. The additional bandwidth will benefit the software industry as well as provide world-class communication services. Future extensions to new POPs are also being planned.

In Coimbatore, VSNL has its international gateway at PSG STEP Software Park in Coimbatore. The Earth station is backed up with a fibre optic cable link to Chennai. VSNL offers both IPLC (International Private Leased Circuit) and Internet both in multiples of 64kbps. STPI's Earth station is also located at Coimbatore at Saravanampatti in the KGISL complex. It also offers both IPLC and Internet leased lines both in multiples of 64 Kbps.



Both the earth stations are seamlessly expandable and by virtue of Coimbatore's locational advantages can get hooked to the wide band width submarine fibre optic cable at Chennai or Kochi for mission critical and delay sensitive applications. With other ISPs having been given license to put up their earth stations or gateways, many of them would be able to provide reliable & redundant connectivity. This will reduce telecom and connectivity costs in Coimbatore. This will also induce companies to set up operations there to take advantage of the cost benefits involved. The current earth station in PSG STEP provides a bandwidth of 14 mbps through optic fibre channels and satellite connectivity to Cochin.

Source : www.coimbatoreit.com

1.13 Power

The supply of power is highest for TN and AP. The power supply has been increasing throughout for all the states. However, the demand also is increasing which is why the deficit has nearly been the same throughout. Most of this deficit has been met through captive power plants or generators. TN is the state with the lowest power deficit.

The demand is continuing to increase and steps have to be taken in order to meet this demand. In order to ensure that there is no power deficit, new power plants have to be built and existing ones have to be made more efficient. Without adequate power supply, IT industries cannot burgeon.

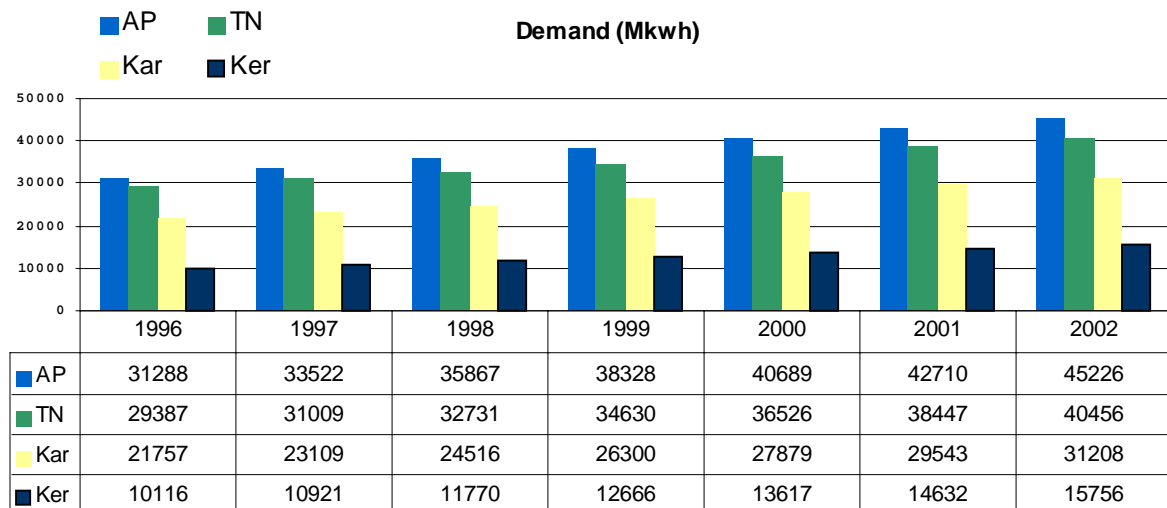


Exhibit 0-15 Demand Conditions of power across states

Source: Central Electricity Authority

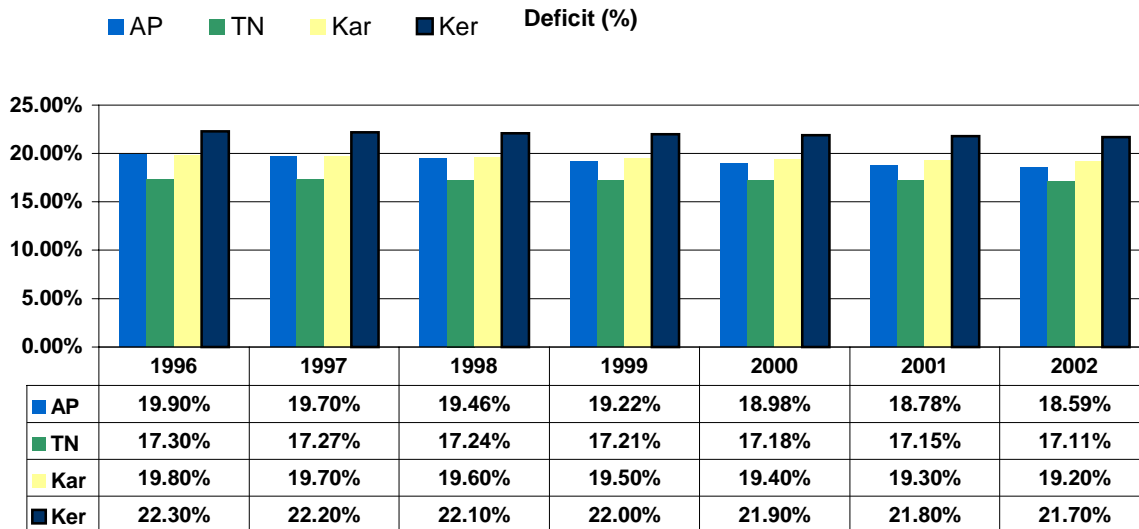


Exhibit 0-16 The power pool deficit across 4 states

Source: Central Electricity Authority

Future requirements

The energy requirements are going to grow at an increasing pace with new industries coming up. At present the growth of supply does not seem to be adequate to meet this growing demand.

TN continues to have the lowest power deficit.

Steps will have to be taken in order to meet this demand. Energy conservation measures will also have to be adopted. Power sources such as wind power or solar energy may have to be tapped. More captive power plants will have to be developed in order to meet this growing demand.

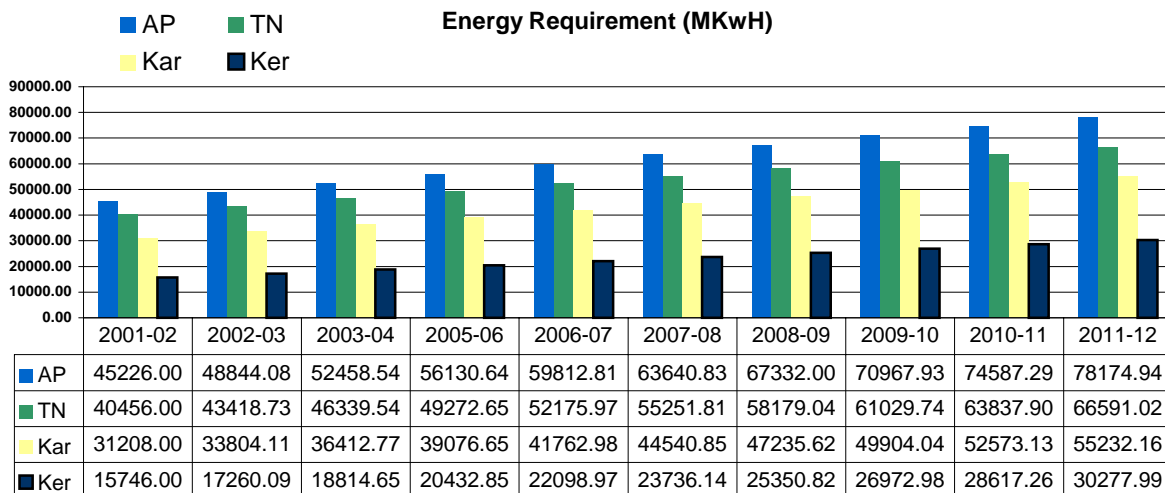


Exhibit 0-17 The energy requirement across 4 states

Source: Central Electricity Authority

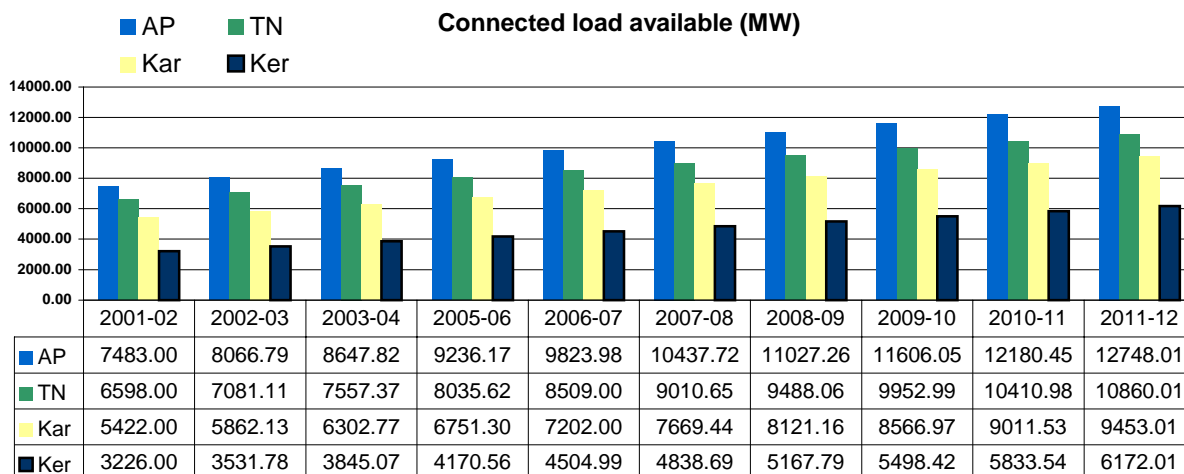


Exhibit 0-18 The connected load available across 4 states

Source: Central Electricity Authority

Power tariffs

Tamil Nadu has the lowest unit cost of power supply. It also has better tariffs than all the southern states except for Kerala. Cost of power is high in Kerala, however the tariffs are lower since it is provided at a loss to the domestic, agricultural and industrial sectors. This may not be a feasible option over an extended period of time since the government is in effect absorbing the losses in power supply.

Tamil Nadu can offer the power at a lower cost and still make a reasonable profit. This could be an action plan required, if it desires to attract more investment in the state.

Unit Cost of power supply

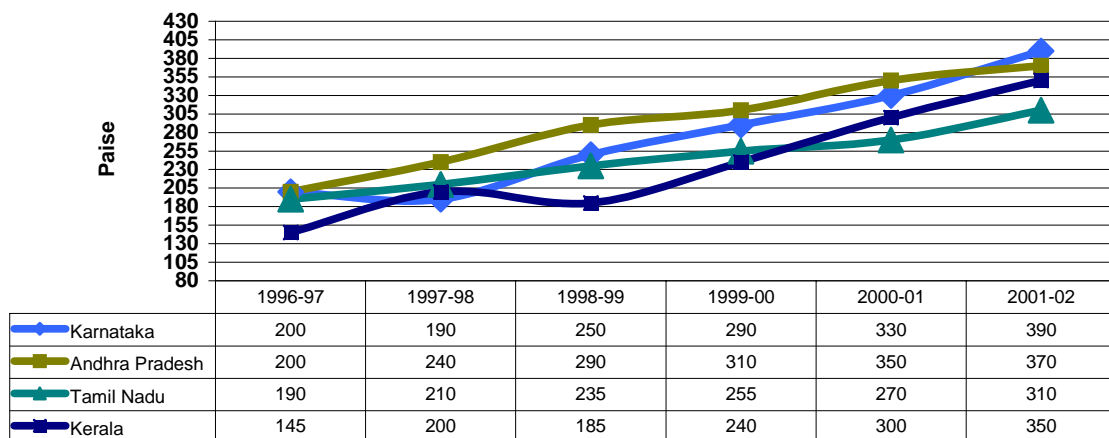


Exhibit 0-19 The unit cost of supply across the 4 states

Source: Central Electricity Authority

From the table, we can infer that the lowest unit cost of power supply is in Tamil Nadu followed by Kerala, Andhra Pradesh and Karnataka. This would create a suitable climate for more industrial houses to set-up base in Tamil Nadu.

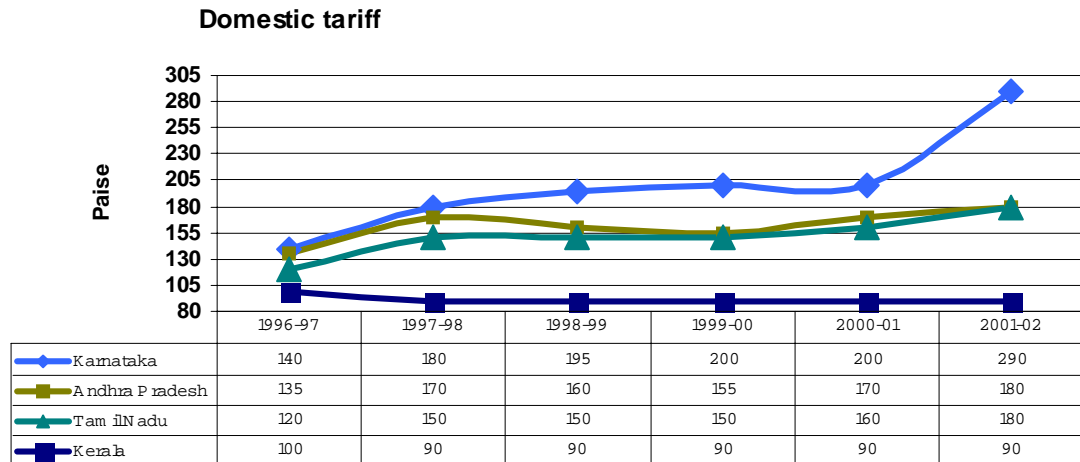


Exhibit 0-20 Domestic tariff across 4 states

Source: Central Electricity Authority

1.14 Cost of Living

Among the southern metros, Chennai offers the most cost-effective environment for IT / ITES business. However with MNCs setting up captive base in Chennai, the standard of living has moved higher and so have salary levels and real estate values.

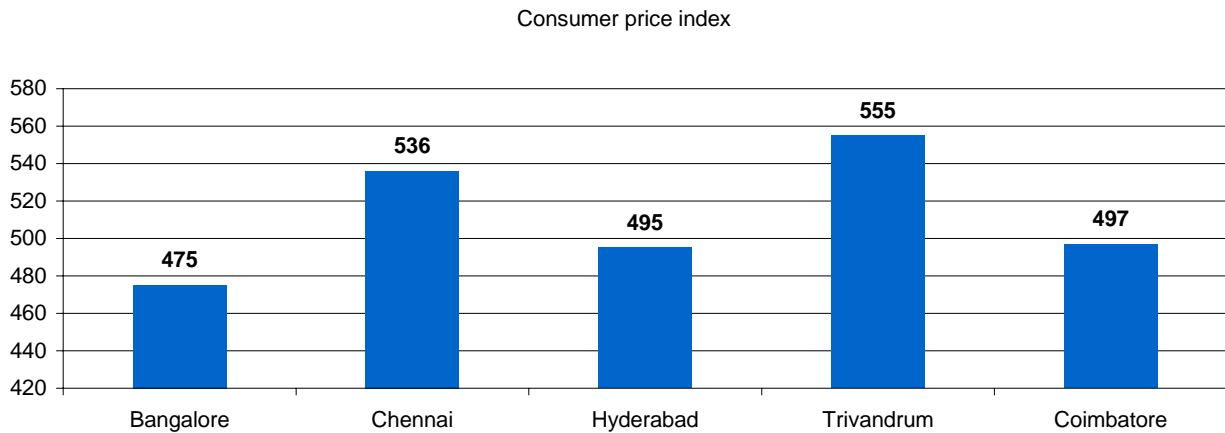


Exhibit 0-21 Cost of living considering 1985 as the base year (as of may 2003)

Source: CMIE

Coimbatore compares favourable on the cost of living factor in comparison to Chennai. However, it should be noted that expenditure in metros such as Bangalore, Chennai and Hyderabad are driven by higher entertainment & convenience spend in packaged food and beverages. In Tier II towns, the propensity to save is considered higher when compared to metro cities.

1.15 Cleanliness and Pollution

	Bangalore	Chennai	Hyderabad	Coimbatore
Peak Pollution level - SO ₂ (µgm/m ³)	4	24	4	6
Peak Pollution level - SPM (µgm/m ³)	369	151	106	55

Exhibit 0-22 Pollution level across 4 cities

Source: NDTV

SO² Sulphur content, SPM suspended particulate matter

Smaller cities appeal to businesses due to reasons like cleanliness, safety, ease of commuting and cost of living. Big cities like Mumbai, Delhi and Chennai have very high pollution levels and are not the cleanest places to live in. The low cleanliness and high pollution of big cities could be detrimental to their plans of attracting big business. They could also create health hazards for the populace. People want a clean and pollution free environment and this is where cities like Hyderabad and Coimbatore score.

Coimbatore, with its clean environment and its salubrious climate in addition to its other advantages could prove to be the perfect place for software businesses.

1.16 Traffic & Commuting

Traffic and Commuting is another important criteria when it comes to promoting businesses. Time is a precious commodity and for people in this business, to use an oft-repeated phrase, “time is money”. If precious time is lost just getting to work and back, then this is a serious hindrance to the business environment that any city would like to overcome.

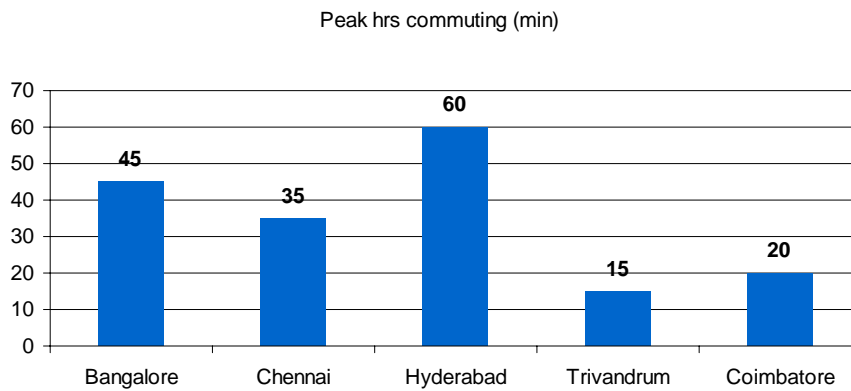


Exhibit 0-23 Commuting time from CBD to residential areas

Source: *Business today*

The quality of roads in Coimbatore and the general infrastructure are reasons for the lower congestion levels.

Road network planning, organization of ring roads to route interstate traffic are some of the strategies that could be undertaken to promote the existing state of road network in Coimbatore to handle future potential traffic.

1.17 Healthcare

In terms of Healthcare the metros provide a robust infrastructure. The best medical facilities are located at the metros and so are the best medical colleges. Some of the leading providers of healthcare such as Apollo in Chennai, Manipal Hospital and Heart Foundation in Bangalore, LV Prasad Eye Hospital in Hyderabad. Other hospitals in these cities provide quality healthcare services.

Coimbatore has a number of medical colleges located in and around the region. An improvement of its medical infrastructure should be a key part of its expansion plans. Better medical facilities go hand in hand with good overall infrastructure and Coimbatore must strive to achieve this.

1.18 Public Transport

The southern cities have a reasonable transport infrastructure. Coimbatore is a comparatively smaller city and hence the number of buses required is less. Besides bus service, taxis and autos are also available at affordable rates and these too provide good transport within the city.

Table below shows the perceptual ranking of Transportation facilities in each city

City	Buses	Taxis	Autorickshaws	Mass Rapid Transport
Bangalore	Fair	Fair	Fair	<i>(Proposed)</i>
Chennai	Good	Fair	Good	Good
Hyderabad	Fair	-	Good	<i>(Under implementation)</i>
Coimbatore	Good	Good	Good	-
Trivandrum	Fair	Fair	Good	-

Exhibit 0-24 Perceptual rating of transportation

Source: PwC analysis

1.19 Air Connectivity

City	International	Domestic
Chennai	1736021	1788005
Bangalore	141854	1854744
Hyderabad	182298	1169832
Coimbatore	-	108120

Exhibit 0-25 Passenger Traffic at the airport

Source: Airport authorities

The metros top the list in these criteria too as expected. These cities have the maximum number of air passengers. Most of the international flights too take off from these three locations.

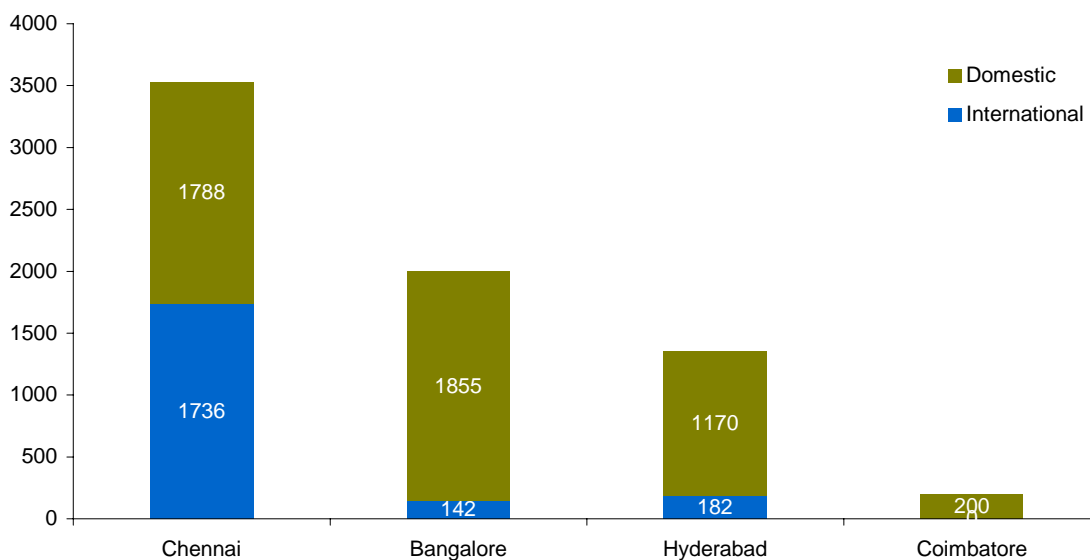


Exhibit 0-26 Passenger Traffic

Source: Airport authorities

Number of people in 000s

Coimbatore has excellent rail and road connectivity but its ranking dips due to its air connectivity. International flights are already plying from Coimbatore. Plans to expand the airport are already in place.

1.20 Career Growth & Work Culture

Bangalore is perceived as a city with a very good work culture, so are Chennai and Hyderabad.

Bangalore is notable because it is perceived as the software capital of India and because of its excellent climate for a typical IT company. Chennai with its technical manpower strength is not far behind, followed by Hyderabad and other Tier II cities.

Coimbatore has climbed quite a few notches and ranks high in terms of professionalism and work culture. The salaries that the managers receive too are highly competitive, compared to other cities.

1.21 Piped water supply

Metros depend more and more on drinking water supply conveyed through tanker lorries. However Coimbatore and Trivandrum have the unique advantage of sourcing continuous water supply from direct resource. An enhancement to the quality of life is the abundant availability of water resource.

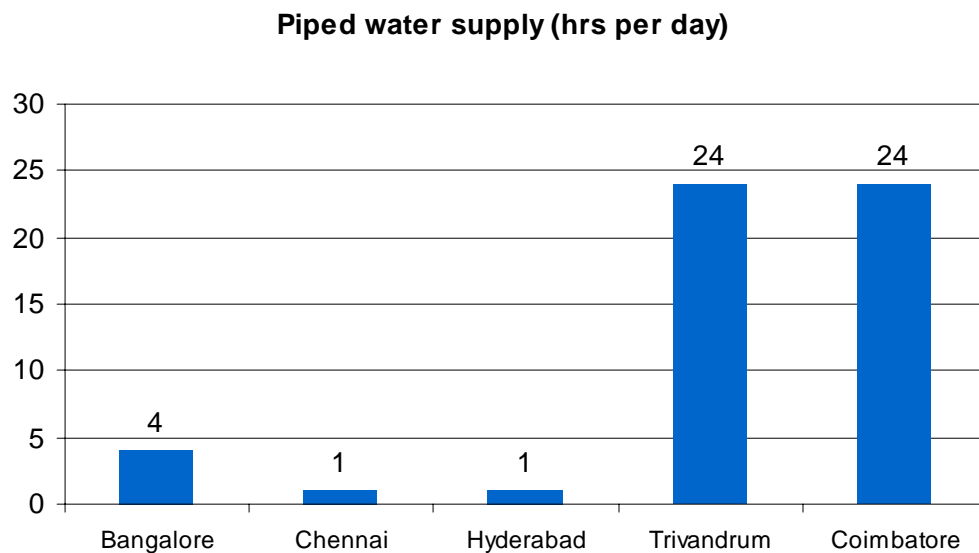


Exhibit 0-27 Piped water supply

Source: *Business Today*

1.22 Basic amenities, hospitality and conveniences

With increasing income levels, life style needs also acquire more importance. These are the gel-well factors that are necessary for an evolving city. Coimbatore has a reasonable infrastructure for some of these basic amenities.

Recreational Facility	Bangalore	Chennai	Delhi	Hyderabad	Coimbatore
Clubs	Fair	Good	Good	Good	Good
Amusement parks	Fair	Good	Good	Fair	Fair
Deluxe hotels	Good	Good	Good	Fair	-
Other hotels	Good	Good	Good	Good	Fair
Restaurants	Good	Good	Good	Good	Good
Discos	Fair	Fair	Good	Fair	-
Pubs/ bars	Good	Poor	Fair	Fair	-
Accessible picnic spots	Good	Fair	Good	Fair	Good

Exhibit 0-28 Basic amenities, hospitality and convenience facility



Conclusion

As per the research conducted by PwC, Coimbatore is a suitable destination for IT / ITES business and it is feasible to set up an IT park in Coimbatore. As per the expansion plans of organizations in the migration model w.r.t Coimbatore, the IT Park is expected to provide a workspace of 1.4 million Sq ft for 14000 professionals by the year 2008. The total estimated export revenues arising from this inflow could be in the region of USD 113 mln by the year 2008. The revenue potential emerging from the domain opportunity could be in the region of USD 50 mln by the year 2008.

There is requirement for a world class IT park facility by the year 2008, providing workspace for 14000 professionals. To facilitate business needs of the IT/ITES organizations, general infrastructure needs to be enhanced. The areas include improving the flight frequencies and timing, upgrading the hotel infrastructure, establishing adequate redundancy, power supply and support services.

The IT park project development calls for speedy government action as neighbouring states of Kerala, Andhra Pradesh and Karnataka are gearing up for substantial investments in IT / ITES ready facilities.

Government action is required to allow speedy clearance of IT park projects, setting up of new business, support in creating and developing a knowledge infrastructure and developing talent within the district.

To promote Coimbatore as an IT destination, it is recommended to conduct a road show campaign across Chennai, Bangalore and Hyderabad as the initial phase.



Recommendatory framework

Agenda for action

Key action points for stakeholders have been represented in the table below

Industry

Strengths	Opportunities	Call for action
Expertise in automotive, castings, textile and pumpset design. Relationship with international OEMs and suppliers	The Mckinsey report estimates the India opportunity for engineering design to be around 1.4-1.5 Bln USD by 2008. Given the strengths Coimbatore has the potential to generate 200- 300 Crores INR by 2008.	<ul style="list-style-type: none"> ➤ Focus on IT related engineering services ➤ Deploy state of the art infrastructure with 100%redundancy of bandwidth and power. ➤ Generate manpower pool by providing intense training programmes ➤ Develop industry academia interaction

Exhibit 0-1 Role of industry in building Coimbatore

Source: PwC Analysis

Association

Strengths	Opportunities	Call for action
Expertise in marketing and promotion	Industry networking, Event management	<ul style="list-style-type: none"> ➤ Market Coimbatore in the international fora ➤ Publish and update marketing collateral on prospects of industrial growth ➤ Lead promotion campaigns in strategic geographies (UK, US) for new opportunities in IT ➤ Align with industry to promote strategic investment in industry ➤ Conduct training programmes in schools, colleges ➤ Orientation programmes in colleges on IT industry practices ➤ Empanelment of training experts in ITES sectors

Exhibit 0-2 Role of association in promoting Coimbatore

Source: PwC Analysis

Government

Strengths	Opportunities	Call for action
<p>Expertise in attracting investments through favorable policies</p>	<p>Incentives and concessions</p>	<p>Power subsidies</p> <ul style="list-style-type: none"> ➤ IT units are exempt from the purview of statutory power cuts ➤ 25% Rebate in Power Tariff is provided to the new IT Industry ➤ Total exemption from payment of sales tax on fuel used for captive power generation without any time limit <p>Investment subsidy</p> <ul style="list-style-type: none"> ➤ 20% Investment subsidy upto a ceiling of Rs 20 lakhs ➤ General Permission to run 3 Shifts ➤ Acquiring quality certification ➤ Subsidize the cost of acquiring level 2 certification and above upto 20% with a ceiling of Rs 20 lakhs <p>Special land pricing policy</p> <ul style="list-style-type: none"> ➤ Land pricing policy for mega projects more than 500 seats (INR 50 crores investments) (IT/ITES) should be in the region of Rs 50 lacs. <p>Exemption from payment of entry tax on machines, equipment, capital goods and construction material procured for implementation of infrastructure projects, for a period of three years or till the date of completion of the project, whichever is earlier, subject to the condition that each invoice should be for not less than Rs.25 lacs (Rs.1 lacs for construction materials).</p>

Exhibit 0-3 Role of government in projecting Coimbatore as a preferred IT destination

Source: PwC Analysis



Guidance note for setting up the project

1.23 Project cost estimates

The total built-up space for the project is estimated to be around 1.39 mln sq ft. Out of this 2,50,000 Sq ft would initially be considered for building in Phase I and the rest in the Phase II.

The construction cost /sq ft is represented below as indicated by market research.

Cost components	Rs/Sq ft
Landscaping	125
<u>Construction costs</u>	
Structural Works	295
Finishing	170
Plumbing	139
Electrical work	300
Air conditioning	300
elevators	20
Fire fighting	70
False ceiling and interiors	116
Total cost	1535

The completion timeline for the first phase would be around 1 year. The first Phase would cost around 41 Crores INR including land. Land for the first 2,50,000 sq ft is around 6 acres. The total debt component would be around 67% or 27 crores. The funding for the project could be done through a combination of private equity, government and institutional debt funding.

We have considered 6 acres of land for the construction of 250000 sq ft initially. But it is recommended to acquire at least 12 acres of land considering future expansion, as scalability in future is extremely vital.

We have arrived at the pay-offs considering two options.

Option 1:

100 % space is let out on lease

Option 2:

30 % space is sold outright and the balance is let on lease

The assumptions⁶ are:

- Occupancy would be only 50 % in the first year and the same would gradually scale up to 100 % in the years following.
- The rentals would start from Rs. 15 / sq ft + Rs. 2 as maintenance. We have also worked out calculations assuming rentals starting at Rs. 18 / sq ft + Rs. 2 for maintenance and Rs. 20 / sq ft + Rs. 2 for maintenance. The price scales up by Rs. 2 / sq ft every five years, starting from year 1.
- The estimated receipt by letting out of common space would be Rs 31/ sq ft.
- The recurring year-on-year expenditure is in the nature of administration expenditure and other miscellaneous expenditure which would broadly cover salaries for staff, maintenance expenditure, rates and taxes, travelling and conveyance, office rent, infrastructure maintenance, ongoing marketing and advertisement expenditure and the like. This has been provided by us on a conservative basis at a higher-end (works out to around 10 % of rental revenues). Year-on-year increase has been taken at around 5% p.a.

⁶ All assumptions are PwC perceptions of existing market conditions and project requirements.

- In year 0, an expenditure of around Rs. 54 lakhs has been considered as an initial outflow for marketing, business development, infrastructure requirement for marketing such as computers, laptops etc. travel, conveyance and rent.
- The debt equity ratio has been taken as 2: 1
- Land value has been considered as capital cost and has been taken as a cash outflow in Year 0
- Land cost is around Rs 28 lacs per acre or 65 Rs / sq ft
- Sale value of land is around 1900 Rs/ sq ft.
- Debt is available at a cost of 9 % p.a.
- Rental deposit of 10 months is assumed depending on the occupancy and it is assumed that the same is invested at a return of 6 % p.a.
- Debt repayment would be gradually done depending on the comfort level of the cash flow. It was seen that the debt is repaid over a period of 11 – 13 years in the various options
- Payback period for equity capital also ranges between 6-11 years depending on various options.
- Construction time assumed as 1 year. It is imperative that the project construction is completed within a period of 1 year considering the fast-growing demand for quality IT space in the knowledge triad.
- No taxation is assumed as it is anticipated to obtain tax relief / holiday.

The IRR for the cash flows over a period of 15 years was worked out and the results for the various scenarios are furnished in tables below:

Option 1 - Assuming 100% lease out of space

	Occupancy @ 50% in the first year, @100% in the year following	Occupancy @ 50% in the first year, @75% in the second year,@ 100% in the third year onwards
Rental rate of Rs 20 per sq ft	17.59%	16.25%
Rental Rate of Rs 18 per sq ft	15.02%	13.87%
Rental Rate of Rs 15 per sq ft	11.12%	10.25%

Option 2 - Assuming 30% sale of the space

	Occupancy @ 50% in the first year, @100% in the year following	Occupancy @ 50% in the first year, @75% in the second year,@ 100% in the third year onwards
Rental rate of Rs 20 per sq ft	18.22%	16.71%
Rental Rate of Rs 18 per sq ft	15.59%	14.26%
Rental Rate of Rs 15 per sq ft	11.47%	10.40%

As per the table above under the worst scenario the IRR would be around 10.25 % and under the best scenario the IRR could be around 18.22%.

After the initial analysis, we are of the opinion that a price of Rs. 18 / sq ft initially and a gradual scale up to Rs. 20 / sq ft later would be ideal.

Following are the next steps that would involve

Activity plan for the project during the ongoing year and the next year
Formal launch of the project
Acquisition of land for the project
Master planning
Structuring and arrangement of finance
Bids for construction
Construction of phase I and completion
Marketing and selling the facility
Managing day to day operations of the park

It is imperative that these steps are taken at the earliest as neighbouring states are gearing up for infrastructure and resource requirements of ITES /IT business.



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- ◆ www.bpo.org - Business Process Outsourcing

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