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Changing Landscape of Higher Education in India

The Case of Engineering Education in Tamil Nadu

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Changing Landscape of Higher Education in India: The Case of Engineering Education in Tamil Nadu

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Abstract

The self financing institutions of higher technical education in Tamil Nadu exploit the circumstances and emerge as something similar to the for-profit higher education in the United States wherein students and families buy higher education services. The private institutions have grown sporadically within a very short span covering more than 90 percent of the total engineering and management colleges in the state. Given this dominant share of private self-financing institutions in higher education with a focus on technical education, the paper attempts to look at the growth of such institutions over a period of time from 1985-86 to 2008-09. The changing nature of higher and technical education is much more nuanced and cumulative across time but also multi-woven in terms of policy paradigms at global, macro economic, sector specific and sub-sector level. The present paper makes an attempt to look at these changing dynamics of higher education, using engineering education in Tamil Nadu as a case of reference. The paper attempts to marshal the emerging salient characteristics of private higher education focusing on technical education in the state. While doing so, it brings out the major issues of the private colleges in the state. Later, it discusses the policy responses to the changes in the higher technical education in the state.

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Changing Landscape of Higher Education in India: The Case of Tamil Nadu

P. Geetha Rani

Introduction

Knowledge is the key resource for global competitiveness. The processes of liberalization, privatization and globalization (LPG), along with technological revolution have further strengthened the significance of a knowledge-based society. Globalization and education are mutually supportive. It is a two way process, as globalization presupposes competitiveness and efficiency in the system and efficiency, in turn, is achieved upon the latest technology or knowledge accessible to the system. The entire process of globalization is technology-driven and knowledge-driven. In order to realize India's aspirations to become a Knowledge Superpower by 2010 and a Developed Nation by 2020, the country requires highly specialized human capital to create, share, use and manage knowledge. It presents both an opportunity – demographic dividend of its youth, especially in the 18-25 age group and the challenge of channelising them through the present confusing to chaotic situation of higher education in India.

Higher education in India and the educationally advanced state of Tamil Nadu needs to be viewed in this fast changing global context. Indeed, the Government of Tamil Nadu devotes special attention to strengthen the higher education system in the state and to respond to the emerging demands of the new century (GoTN, 2006a). The Government of Tamil Nadu is committed to a range of objectives, including economic growth, distributional goals, social inclusion, etc. Higher education is directly relevant to all these, besides the pursuit of knowledge for its own sake. For higher education, these imply that in order to support growth, the sector needs to be large enough, of high quality, and responsive to a rapidly-changing environment. In addition, to support distributional objectives, the needs of the weaker sections of the society including women, rural population, socially and economically backward communities are to be taken care of (GoTN, 2006a).

Achieving the objective of growth with equal access requires not only the full responsibility of the 'state' but also huge investments on the education sector, especially on

higher education. In an era of declining government finances for higher education, private sector plays a dominant role, especially in professional higher education in India and Tamil Nadu in particular. In this light, the paper concentrates on the rapid growth of private sector in higher education, which led to the changing landscape of higher education in Tamil Nadu. The changing nature of higher education is much more nuanced and cumulative not only across time period but also multi-woven in terms of policy paradigms at the global, macro economic, sector specific and sub-sector levels. The present chapter makes an attempt to look at these changing dynamics, using Tamil Nadu as a case of reference. The plan of the chapter is outlined in four sections. The first section deals with the growth of the higher education system in Tamil Nadu. The second section presents the trends across the structure and institutional types of higher education. Section III attempts to marshal the emerging salient characteristics of private sector higher education with a focus on engineering education in the state. The final section brings out the concluding remarks**.**

I. Growth of Higher Education:

The system of higher education in India is one of the largest in the world. The system of education in India inherited a poor educational infrastructure from the colonial masters. The colonial policy focused neither on mass education nor on higher education. As a consequence, the country had to begin from scratch soon after its Independence. In order to meet the requirements of professional and technical manpower in a developing economy, the government set up the Indian Institutes of Technology, regional engineering colleges, medical colleges, arts and science colleges and universities. However, to begin with, there were only 20 universities and 500 colleges at the time of Independence. In 1990-91, there were only 179 university level and research institutions which grew to 511 in 2006-07. During the same period, the colleges grew from 4,152 to 19,812 in the country (see Table 1). The growth of the colleges during this period was high at 7.16 percent per annum compared to 4.58 percent at the university level. Tamil Nadu, the second industrialized state after Maharashtra, has registered a higher growth rate both at university level and also at college level than at the national level (see Table 1).

Table 1

Growth of Higher Educational Institutions and Enrolment in India and Tamil Nadu

	India				Tamil Nadu			
	Univs& R. instns	Colleges	HEIs	Enrolment*	Univs & R. instns	Colleges	HEIs	Enrolment*
1980-81	179	4152	4358	2.76	8	382	390	0.19
1985-86	198	5232	5043	3.83	8	395	403	0.21
1990-91	233	6627	6289	5.03	16	608	624	0.24
1995-96	290	9033	8247	6.38	20	716	736	0.36
2000-01	331	11304	10515	10.00	23	986	1009	0.42
2001-02	351	14232	11497	9.74	26	989	1015	0.59
2002-03	385	14913	12161	10.01	28	1558	1586	0.56
2003-04	389	15274	10716	10.23	28	1530	1558	0.61
2004-05	443	16009	16452	11.77	42	1642	1684	0.81
2005-06	490	19495	20769	14.32	36	1436	1645	1.32
2006-07	511	19812	21108	15.55	38	1530	1759	1.59
Gth. Rates	4.58	7.16	7.23	7.44	5.47	7.24	7.64	11.34

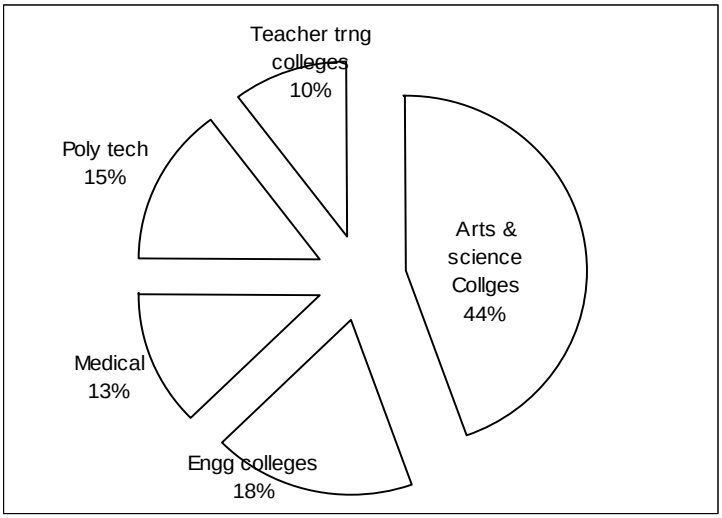
Note: * enrolment in millions; Growth rates (in %) are estimated by fitting a semi log liner trend regressions from 1990-91 to 2003-04.

Source: Selected Educational Statistics, various issues

A similar trend can also be found at the growth of enrolment that it has been 7.44 percent per annum at the all India level, while it was 11.34 percent in Tamil Nadu. However, the bulk of higher education enrolment around half of the enrolled students are in general arts and science colleges with another 18 percent in engineering and 13 percent in medical courses (Chart 1). It is important to note this lower distribution compared to the general arts and science colleges as most "private investment" in higher education is concentrated in engineering, medicine and management.

Chart: 1

Distribution of Higher Educational Institutions by Discipline in 2006-07 in Tamil Nadu



Source: Same as Table 1

In recent years, women's enrollment has been in higher proportion in higher education institutions. During 2006-07, about 42 percent of the student strength of the State was women, which was only 37 percent during 1990-91. It is also a policy of the State to promote the participation of women at all levels of higher education, especially the levels that require special talents, knowledge and skill. The annual growth rates of female students enrolment is 10 percent and while the growth rate of male students is around 6 percent during the period between 1990-91 and 2006-07 (see Table 2).

Table 2
Enrolment in Higher Educational Institutions by Gender in Tamil Nadu (in 000s)

	Boys	Girls	All	% of Girls in Total
1990-91	149.91	90.04	239.95	37.5
1995-96	202.85	153.87	356.71	43.1
2000-01	215.43	203.84	419.27	48.6
2001-02	326.60	266.14	592.74	44.9
2002-03	302.63	255.87	558.50	45.8
2003-04	321.60	291.57	613.18	47.6
2004-05	283.51	260.19	543.70	47.9
2005-06	769.68	554.68	1324.36	41.9
2006-07	916.53	671.00	1587.53	42.3
GR	6.01	9.85	7.60	

Source: same as Table 1

This increase in girls' enrolment could be on account of the realization of the significance of girl's education and the expanding labour market opportunities for girls. The Government of Tamil Nadu is also considering providing special incentives to women students who wish to pursue doctoral studies (GoTN, 2006a). Despite this growth of institutions and enrolment in higher education in India, the enrolment ratio[1] in higher education was only 12.39 percent in India and 20.12 percent in Tamil Nadu during 2006-07. However, the gross enrolment ratio in higher education in Tamil Nadu is higher than the national average but only behind states like Maharashtra and Himachal Pradesh (see Table 3). The enrolment ratio of girls is much lower than boys at the national level as well as across states. It is important to note that the age group entering higher education in countries like the U.S.A and Canada is above 80 percent. It is above 50 percent in majority of the developed countries. If India aspires to become a developed nation by 2020, the threshold level of the

[1] Students between the ages of 17 and 24

age group entering higher education must at least be 25 percent. Neither India nor Tamil Nadu is near this threshold level.

Table 3
GER in higher Education* in Selected States in India during 2001-02 and 2006-07

States	2001-02			2006-07		
	Boys	Girls	All	Boys	Girls	Total
Mahrashtra	14.0	9.7	12.0	16.58	12.52	14.74
Himachal	13.7	10.0	11.8	15.55	16.33	15.93
Tamil Nadu	12.4	8.9	10.7	23.39	16.89	20.12
Haryana	11.5	9.2	10.5	13.05	12.56	12.84
Karnataka	11.2	7.5	9.4	17.78	12.96	15.47
Gujarat	9.8	8.1	9.0	9.53	7.76	8.70
Andhra	10.3	6.4	8.4	19.15	12.09	15.64
Punjab	7.5	9.4	8.4	13.03	12.69	12.87
Orissa	10.8	5.7	8.3	15.94	3.96	10.00
India	9.3	6.7	8.1	14.53	10.02	12.39

Note: * includes polytechnics
Source: Selected Educational Statistics, 2001-02; 2006-07

In order to attain this threshold levels of gross enrolment ratio in higher education, there need to be a concomitant qualitative expansion not only in higher education but also in school education. But what is happening is a sheer quantitative expansion of private unaided sector. The policy changes paved the way for expanding self-financing or the private unaided sector. Further, state funding was highly inadequate with just 3.5 percent of its GDP invested on education. With the combined forces of macro economic reform polices, LPG and the rise in social demand, the private sector and also the 'private' aspect of higher education has been growing. To what extent, the private unaided sector has grown in Tamil Nadu since 1990s is examined in the following section.

II. Management Structure and Institutional Type

The structure of higher education in India and in many states including Tamil Nadu consists of universities, research institutions, deemed to be universities which are at the highest level of higher educational institutions. At the next level, it is the colleges by disciplines such as general arts and science, professional including engineering, management, medical, agriculture and law colleges. These structures and distribution of higher education in Tamil Nadu is presented row wise for the year 2006-07 in Table 4. There are 35 university level

institutions comprising general higher education universities, technical universities, agricultural, law and medical universities during 2006-07(see column 5 of Table 4).

Table 4
Structure of Higher Educational Institutions by Type of Management in Tamil Nadu in 2006-07

Institutions	Govt. (in %)	Pvt. Aided (in %)	Self-fing. (in %)	Total (in numbers)	% of Institution type in total Institutions
	(2)	(3)	(4)	(5)	(6)
Univs. including DU.	57.1	11.4	31.4	35	2.48
Arts and Science colleges	12.2	27.1	60.6	490	34.78
Engineering Colleges	4.0	1.2	94.8	248	17.60
Polytechnics	10.3	18.2	71.5	214	15.19
Medical colleges	60.0	0.0	40.0	25	1.77
Ayurveda colleges	0.0	40.0	60.0	5	0.35
Dental colleges	5.9	0.0	94.1	17	1.21
Homoeopathy	10.0	0.0	90.0	10	0.71
Law colleges	72.7	0.0	27.3	11	0.78
Management*	8.2	1.4	90.4	146	10.36
Agriculture Colleges	72.7	27.3	0.0	11	0.78
Colleges of Education	4.4	8.8	86.9	160	11.36
Colleges of Physical edn	0.0	37.5	62.5	8	0.57
Others**	6.9	41.4	51.7	29	2.06
All	11.8	15.3	73.0	1409	100.00

Note: PA – private aided; DU – Deemed Universities; * Management institutes are part of the existing institutions except 44 additional individual business schools (includes hotel mgt) (see Saravanan, 2007); ** others include
Source: www.ugc.nic.in; based on Government of Tamil Nadu (2007a); Statistical Handbook of Tamil Nadu, 2006.

A large number (490) of general higher education colleges namely arts and science colleges exist which are affiliated to universities that are under the overall purview of the University Grants Commission (UGC). These general colleges occupy the highest share of 35 percent (see column 6 of Table 4) of all higher educational institutions[2]. The professional colleges include engineering, medical, pharmacy, agriculture, law, management (constitute another 35 percent) and a few others like colleges of education, etc. The professional colleges fall under the purview of various bodies - engineering, pharmacy and management colleges and computer application programmes are to get the approval of AICTE, medical colleges the Medical Council of India and Law colleges - the Bar Council of India. There is an overlap of various regulatory bodies in higher and professional education.

[2] Even though UGC is the regulatory body of all such colleges in the country at the federal level, the state governments equally play a vital role at the policy level.

For instance, the management and computer application courses attached to general arts and science colleges, which fall under the purview of UGC, need to get the approval of the AICTE also. As noted by Singh (2004) and a few others, the Centre has set up more than twelve professional councils. Each one of them has specific powers relating to the area with which it is concerned. Each one of them has a specific role to play and it is for the Ministry of Human Resource Development to deal with how they coordinate their functioning with one another.

Yet another dimension presented vertically in Table 4 is the institutional type by management. The educational institutions in India and in states are of three basic types based on funding and provision: (i) government provision and financing of higher educational institutions; (ii) private provision and government financing referred as private aided institutions and (iii) private provision and financing referred to as self-financing institutions. Internationally, three most prominent types, such as culturally pluralistic type, consisting of religious, charity, and philanthropy – termed as the fused private-public entities. These are somewhat similar to the private aided sector in many states in India. This type of management reflects simultaneous dominance of private aided institutions in Tamil Nadu during 1970s until middle of 1980s. The third type is the self-financing institutions which are in the nature of non-elite but demand absorbers. Their growth is accelerated in recent decades especially since 1990s primarily because of the excess of demand over supply (Geiger, 2004: Levy, 2006).

The self financing institutions in Tamil Nadu exploit the circumstances and emerge as something similar to the for-profit higher education in the United States wherein students and families buy higher education services in the market place (Morey, 2004; Kinser and Levy, 2007). It has developed sporadically within a very short span covering more than 90 percent of the total engineering and management colleges in the state (see column 4 of Table 4). Even among the general arts and science colleges 60 percent are self-financing. Among the higher educational institutions, about three fourth are self-financing type of institutions. Given this dominant share of private self financing institutions in higher education, the

following section attempts to look at the growth of such institutions over a period of time that is from 1990-91 to 2006-07.

II. (a) Pattern of Growth: The Trend

This section examines the pattern of growth of higher education under various levels from university level institutions to colleges by disciplines in the state.

Universities

University level institutions comprise Institutions of National Importance; State Universities; Deemed to be Universities with government funds, Deemed Universities without government funds or self-financing or private universities. Two institutions of national importance, Indian Institute of Technology and Dakshina Bharti Hindi Prachar Sabha, both funded by the Ministry of Human Resource Development (MHRD), and another two deemed universities getting UGC funds are located in Tamil Nadu. Higher education is in the concurrent list with the Centre having an important role. But, the federal commitment to higher education as institutions of importance and deemed universities remained stagnant since 1990-91 or much earlier since 1959 in the case of IIT, and 1964 with regard to Dakshina Bharti Hindi Prachar Sabha. Among 18 state universities only 12 get plan funds or development assistance from the UGC (see Table 5).

Table 5
Growth of University Level Institutions by Funding Type in Tamil Nadu

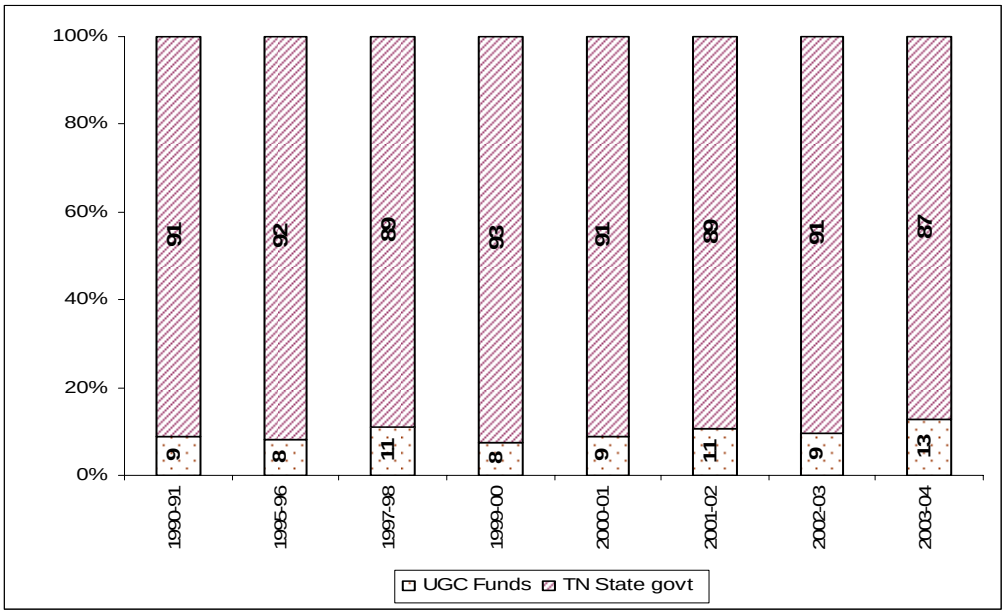
Type	1990-91	1995-96	2000-01	2006-07	Funding Source
Institutions of National Importance	2	2	2	2	MHRD
State Universities	13	14	16	18	State govt/UGC
DUs with govt funds	2	2	2	2	State govt/ UGC
DUs (self financing)	7	10	10	13	Self-financing
All	24	28	30	35	

Source: Based on UGC Annual Reports, various issues and www.ugc.nic.in downloaded as on 17.05.2007

The state universities are primarily funded by the state government and they get a meager share of plan assistance from the UGC. It is to be noted that the new state universities established since 1990-91 do not get any central assistance. Unfortunately, no central university exists in the state for a full funding of plan and non-plan assistance by the

UGC. Centre allocation to states for higher education take place via MHRD and UGC[3]. The share of UGC funds in total higher education expenditure in the state was as low as from 7.5 percent to around 12.5 percent in the last one and a half decade(see Chart 2).

Chart 2
Share of Expenditure on General Higher Education by Government of Tamil Nadu and University Grants Commission



Source: Based on Analysis of Budgetary Expenditure on Education and UGC Annual Reports various issues.

It has also been a policy of shifting greater responsibility for funding and managing public higher education from federal to state governments; state government to private sector.

None of the 13 deemed universities in the state in 2006-07 got the UGC plan funds. The number of deemed universities almost doubled in the state from 2003 to 2006-07. Under section 3 of the UGC Act, 2003, deemed universities are required to possess viability and a management capable of contributing to university ideas and traditions. Under this scheme, a number of private institutions have been granted the status of a deemed university. In addition, the AICTE had also given deemed university status to many private engineering colleges. It is to be noted that the expansion is predominantly under self-financing universities. Private institutions that initially specialized in one academic field expanded into

[3] The information on total central government transfers to higher education by states is not readily available. From UGC annual reports, one can cull out information from the fund allocation to state universities and colleges in Tamil Nadu. However, similar information is not available from MHRD annual reports.

other revenue generating disciplines and virtually became self-financing universities. As a result, some of the engineering and also medical colleges in the State have metamorphosed into deemed universities. These were small institutions that were clearly demand-absorbing and transformed into a university by the policy changes. Such policy changes seem to have been happening elsewhere. For instance, a similar policy change in UK made all polytechnics to become degree awarding universities in 1992 (Shottock, 2001).

Arts and Science Colleges

Against the general belief that *de facto* private sector expansion takes place in the professional education (Kapur and Mehta, 2004), the share of private arts and science colleges is about two third of (61 percent) of the total arts and science colleges in Tamil Nadu (see Table 7). Opening of self-financing general arts and science colleges started in the state in 1994-95 (GoTN, 2003). The annual growth rate of private unaided or the self financing colleges is rapid at the rate of 20 percent during the period from 1990-91 to 2004-05. Share of government and private aided colleges during 1990-91 was 86 percent which drastically came down to 43 percent during 2004-05. The self-financing colleges started to occupy more than 50 percent share since 2000-01(see table 6).

Table 6
Growth of Arts and Science Colleges and Enrolment therein in General Higher Education by Type of Management in Tamil Nadu (in %)

	Institutions				Enrolment			
	Govt	PA	PUA	Total*	Govt	PA	PUA	Total*
1990-91^	25	61	13	215	27.2	69.1	3.7	207042
1995-96	21	47	32	280	26.7	63.0	10.3	317213
2000-01	14	31	55	426	21.7	54.2	24.1	410508
2001-02	14	30	56	440	21.4	54.0	24.5	421012
2002-03	14	30	56	440	21.0	54.2	24.9	436642
2003-04	14	30	56	441	21.1	53.6	25.3	461026
2004-05	13	30	57	444	19.2	51.5	29.3	513222
Growth Rate**	1.0	0.1	20.4	7.1	2.3	3.9	15.8	6.0

Note: * total in numbers; ^ prior to 1990-91 there is no separate information available between private aided and unaided colleges; ** Growth rate is estimated by fitting a semi log linear trend regression.
Source: Statistical Hand book of Tamil Nadu, Chennai

Even though the number and proportion of self financing or the private unaided colleges have been outgrowing government and private-aided institutions, more than 70 percent of the students are enrolled in government and private aided colleges even in 2004-05. And also the

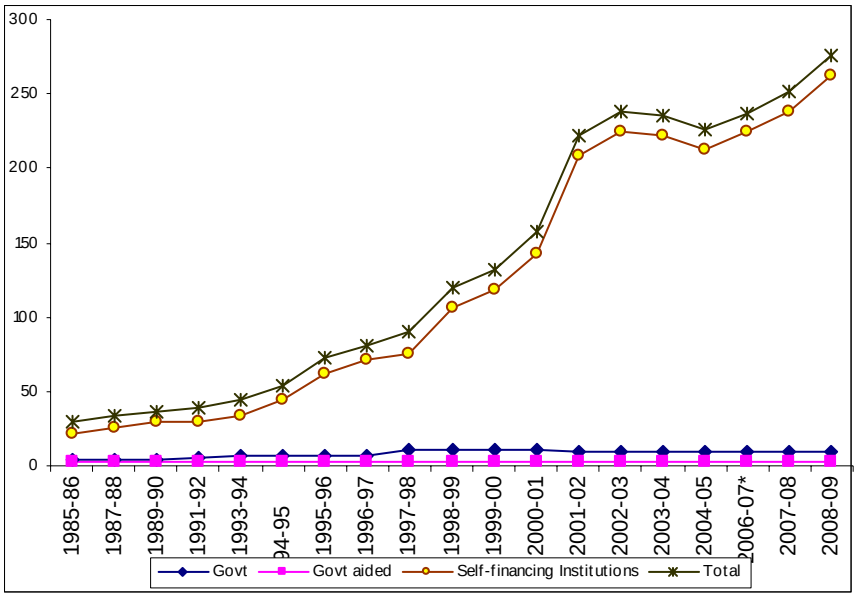
extent of cost recovery is severe in the professional self-financing colleges than in general arts and science colleges. The extent of cost recovery further varies within these colleges and across courses. For instance, arts and science colleges are not self-financing except for job oriented courses, like BBM, MBA, Bio-technology, and the like.

Engineering Colleges

The growth of private engineering education has been spectacular in a few southern states such as Andhra Pradesh, Tamil Nadu and Karnataka along with Maharashtra, reflecting the global trend. Indeed, the engineering discipline in these states is *de facto* under the private sector with provision for almost full recovery of costs. The fast growth in the private sector is on account of the fact that during the Sixth Five Year Plan (1980-85), when the central and state governments were finding it difficult to expand technical education in the country, a few state governments, especially the governments of Karnataka, Maharashtra, Tamil Nadu and Andhra Pradesh took a bold decision to permit private registered societies and trusts to establish and run technical institutions on a self-financing basis. These are institutions of a new generation unlike the previous set of private institutions started under the charity motives. As a result, a large number of private self-financing institutions came into existence in the above four states in the early 1980s itself (AICTE, 1999).

All these institutions were established with the permission of the respective state governments and were affiliated to the universities of the region with the approval from both the State Boards of Technical Education and AICTE. The expansion in engineering education in Tamil Nadu, has been only in the private sector from the middle of 1990s. Even though private initiatives in education is an old phenomenon in the state with the initiatives of Christian missions and Nattukottai Chettiar community, but in the 1980s, it was the turn of politicians, industrialists and other individuals. This trend led the self-financing colleges to occupy a share of three fourth of the total engineering colleges in the state. Eventually, private sector exhibits almost full presence in engineering education in Tamil Nadu in 2008-09 (see Chart 3).

Chart 3
Growth of Engineering Colleges by Management Type in Tamil Nadu



Source: Statistical Hand book of Tamil Nadu, Chennai

This unfettered trend grew to occupy more than 95 percent of the total engineering colleges during 2008-09. The self-financing colleges grew at an annual rate of 18.14 percent during the period from 1993-94 to 2008-09**.** It is the private sector that is providing engineering education in the state. Tamil Nadu, with about 249 private engineering colleges, has the second largest number of engineering colleges in the country. The Government and private aided colleges are a mere 13 in number and constitute five percent of the total engineering colleges. Even though there is no evidence, government colleges have significantly better facilities and quality of education than the self-financing engineering colleges[4]. Almost a similar rapid growth has been observed in the management disciplines as well.

Management Colleges

Management Education in colleges affiliated to universities started at Calcutta in 1954, quickly followed by Universities of Bombay, Delhi and Madras. In order to meet the growing demand for management education, the AICTE permitted from 1993-94 a large number of MBA and Post Graduate Diploma in Business Management programmes on self-financing

[4] However, all government and aided engineering colleges offer courses that are accredited by National Board of Accreditation (www.nba.org).

basis. Tamil Nadu was again in the race along with Maharashtra and Andhra Pradesh, these three states alone accounted for nearly 60 percent of the full-time seats. The private societies and trusts in these states had the experience of establishing and managing diploma and degree level engineering colleges and, therefore, were quick in taking the lead in the sector of self-financing management education (AICTE, 1999). The management educational institutions first began to appear in 1987-88 in Tamil Nadu and grew many fold between 1994 and1999 and then the growth gradually stagnated. Among the 146 institutions in 2005-06, ninety one percent of them are self-financing institutions and do not get any grant from state or Central government (see Table 7).

Table 7
Management Educational Institutions by Type of Management in Tamil Nadu

Management Type	1990s	Since 2001	1990s	Since 2001
	(in numbers)		(in per cent)	
Govt (state colleges, univ depts.. DU, Central govt)	4	8	3.9	5.4
Private aided	1	2	1.0	1.4
PUA (including private DUs)	98	138	95.1	93.2
Total	103	148	100	100

Source: based on www.aicte.nic.in downloaded as on 20.5.2007

Almost a similar trend could be observed in medical and para medical education as well.

Medical Colleges

A total of 243 Medical and Para-Medical institutions including siddha, homeopathy, unani, ayurveda, dental, pharmacy, nursing, physiotherapy and others institutions existed in Tamil Nadu in 2006-07. Both government and private unaided institutions are affiliated to the Tamil Nadu MGR Medical University. Government medical and para medical colleges in the state occupy 11 percent, while medical colleges owned and run by private unaided managements share 88 percent (see Table 8). Out of these 243 institutions, 91 institutions offer post graduate/diploma courses. Of these 91 post graduate institutions, the majority that is 82 percent are in the private sector. Almost all the para medical courses such as Dental, Pharmacy, Nursing Physiotherapy, and Occupational Therapy are with the private sector (www.tnmgr.univ.org).

Table 8
Medical colleges and Enrolment by Management in Tamil Nadu as on 2006-07

Courses	Colleges			Enrolment		
	Govt.	Private	Total	Govt.	Private	Total
Medical	66.7	33.3	21	78.6	21.4	1965
Siddha	40	60	5	62.5	37.5	240
Homeopathy	10	90	10	10	90	500
Unani	100	0	1	100	0	26
Ayurveda	0	100	5	0	100	150
Dental, Pharmacy, Nursing	5.9	91.3	132	9.5	90.5	5175
Physiotherapy & Others	4.3	95.7	69	2	98	2782
Total	11.1	88.5	243	19.3	80.7	10072

Source: based on www.tnmgr.univ.org

The Government of Tamil Nadu plans to start three new medical colleges in the state. Besides, it proposes to increase M.B.B.S. seats in five medical colleges. The Government has accorded sanction for the creation of an additional 315 seats in the MBBS Course (GoTN, 2004). Despite this expansion, private sector plays a major role in allied and para medical fields.

Agricultural Colleges

Agriculture education in Tamil Nadu has been primarily state funded. There are 11 government and two affiliated agricultural colleges (GoTN, 2007b). However, the privatization process has already begun there as well. For instance, the Tamil Nadu Agricultural University (TNAU) has introduced master degree and doctoral programmes on a self-supporting basis (www.tnau.ac.in).

Law Colleges

There are five Government Law Colleges in Tamil Nadu at present that are affiliated to Tamil Nadu Dr. Ambedkar Law University (see Table 9). Besides a few of the university departments provide legal education at the post graduate level. There is only one private law colleges in the state. (GoTN, 2006b). The private sector in legal education, like that of agricultural education is limited in the state.

Table 9
Law Colleges having Deemed/Permanent/Temporary approval of affiliation of the Bar Council Of India as on 1.1.2006

Name of the College	Courses Imparted	Establishment Year
Central Law College, Salem	3 Year & 5 Year	1982
Government Law College, Thiruneveli	3 Year & 5 Year	1996
Government Law College, Thirchy	3 Year & 5 Year	1979
Government Law College, Coimbatore	3 Year & 5 Year	1979
Dr. Ambedkar Government Law College, Chennai	5 Year (B.A.B.L.) Hons.	1891

Source: website of Bar council of India, downloaded in June 2007

As the growth pattern suggests, private sector in the case of Tamil Nadu is found to have substituted the public sector by absorbing the excess demand. It is important to note that this period coincides with economic reforms and the policy changes at the macro economic level and also at the micro or sub-sectoral level in higher education. This is primarily the impact of economic reforms initiated during the beginning of 1990s. The five major components of the new economic policy initiated in the beginning of 1990s include Liberalization, Privatization and Globalization (LPG), currency convertibility and reduced role of the state. These reform packages imposed a decline on the public budgets on the education sector, more specifically on higher education. The macro economic reforms also resulted in severe cuts on the education budget reflecting in several policy directions. Such policy changes have paved the way to several alternatives, including self-financing courses in government and aided colleges besides the rapid expansion of the private sector in higher education.

From 2000 onwards, the second generation economic reforms, which percolate down to the state level in terms of the Fiscal Responsibility and Budget Management (FRBM) Act notified on August 2003, that aims to eliminate the revenue deficit by 2008-09. Tamil Nadu has enacted the FRBM Act in the same year as that of the Central Act. This fiscal reform has reflected on the public expenditure on education sector, more specifically so on higher education. With the rapid increase in social demand for higher education and the declining budgets have resulted in several policy directions such as the expansion of self-financing colleges. It strongly encourages for full cost recovery (user pays principle).

It is clear that the institutional landscape of higher education is changing drastically. The number and share of government colleges and universities are declining while self-financing institutions are growing in strength, strongly tied to broader processes of LPG. An important aspect of this LPG policy has been to allow the private sector to attract a growing number of students who do not qualify the entrance exams to public institutions. Even though this has not been an explicitly stated policy, but by limiting the intake of public higher education institutions without expanding the government institutions gave a green signal to the expansion of the private sector. Given this trend, the thrust of the rest of the paper is on elucidating the salient characteristics which emerge from the self-financing engineering colleges in the state and what has been the response from the regulatory authorities.

III. Emerging Characteristics and Major Issues of Self-financing Engineering Colleges in the State:

This section examines two major aspects of the self-financing engineering colleges, viz., major characteristics and major issues relating to self-financing colleges. The characteristics of the self financing engineering colleges are examined in terms of provision. The major aspects covered under this include:

- number of institutions and intake by location
- background of sponsors
- affiliation
- single and multiple discipline institutions
- size and composition of faculty at different levels and qualifications and
- infrastructure (extent of campus, presence of major facilities such as library, labs, etc.)

Further, the major issues relating to self financing colleges are examined in terms of –

- admission criteria and procedures
- fees
- quality
- performance
- performance evaluation and
- functioning of regulatory authorities

The information used for this analysis primarily comes from the websites of the individual institutions, besides the AICTE website and the Statistical Abstract and Policy Notes on Higher and Technical Education in Tamil Nadu. The individual websites of 43 self-

financing engineering colleges (courtesy: tamilnow.com; list of colleges attached in Appendix Table - A7) has been meticulously looked at to decipher the information on various aspects examined here. In each of the aspects, the kind of information provided by the colleges in their websites vary at great deal. Such variation is found despite the fact that AICTE has stipulated to provide the mandatory disclosure of information by each of the self-financing engineering colleges in a standard proforma.

III. 1. Salient Characteristics:

III. 1. i.(a) Number of Institutions by Location

Universities in the State range from the traditional ones that offer arts and science courses to those offering technological, law, medical, veterinary and animal science courses. But, the private deemed universities offer courses in engineering, medicine and management. Some of the self-financing engineering and medical colleges in the State have metamorphosed into deemed universities since 2003. In these 13 private universities, seven exclusively cater to professional education. Another six cater to a mix of arts and science, pharmacy, para-medical, engineering and management subjects. Among the 13 private universities, seven universities have been located in Chennai itself, besides Chennai having eight public universities (see Table 10).

Table 10
Self-financing Deemed Universities by Location and by Year of Establishment in Tamil Nadu in 2006-07

Sl.No.	Name of the college	Location	Year of Estt.
1	Meenakshi Academy of Higher Education and Research	Chennai	2004
2	S.R.M. Institute of Science & Technology	Chennai	2002
3	Sathyabama Institute of Science and Technology	Chennai	2001
4	Saveetha Institute of Medical and Technical Sciences	Chennai	2005
5	Sri Ramachandra Medical College and Research Institute	Chennai	1995
6	Bharath Institute of Higher Education & Research	Chennai	2003
7	M.G.R. Educational and Research Institute	Chennai	2003
8	Amrita Vishwa Vidyapeetham	Coimbatore	2003
9	Karunya Institute of Technology and Sciences	Coimbatore	1986
10	Sri Chandrasekharendra Saraswathi Viswa Mahavidyalaya	Kancheepuram	1994
11	Vinayaka Mission's Research Foundation	Salem	2000
12	Shanmugha Arts Science, Technology & Research Academy	Thanjavur	2001
13	Vellor Institute of Technology	Vellor	2001

Source: Based on www.ugc.org, other university websites, downloaded as on 14.5.2008

The adjacent districts of Chennai, such as Kancheepuram and Vellore house another two private universities. Amrita Institute of Technology and Science; and Karunya Institute of Science and Technology, all located in Coimbatore, where three government universities already exist. Vinayaga Mission Institute of Technology in Salem district, which has a state university and Shanmugha Arts, Science, Technology and Research Academy (SASTRA) in Thanjavur which houses a state university.

It is important to note the nexus between public and private participation in education. In almost all the places wherein the private university is coming forward houses either one or many public university. On the contrary, it is also important to note no private university is located in backward districts like Sivaganga or Ramnad. The private sector comes forward to participate in such locations where the public sector had already invested and are economically prosperous.

A similar trend can be observed by looking at the number of private engineering colleges across districts in the state. In 2002-03, there were 241 private engineering colleges situated in different parts of the State. These had increased to 255 and 261 during 2004-05 and 2006-07 respectively (see Table 11). Kancheepuram has the highest number of private engineering colleges covering 25 percent of the total private colleges in the state (see Table 11). The number of colleges have increased from 58 in 2002-03 to 63 in 2004-05 to 64 in 2006-07. The official statistics from the Statistical Abstract do not report the private engineering colleges in Chennai. However, the information from AICTE show that Chennai and surrounding areas (including Kancheepuram and Thiruvallur) alone have 87 engineering colleges (see Appendix Table - A1).

Table 11
Number of Self-financing and Total Engineering Institutions by Districts in Tamil Nadu in 2002-3, 2004-05 and 2006-07

District	2002-03			2004-05			2006-07		
	Self-Finan-	Total	Propn. PUA to total**	Self-Finan-	Total	Propn. PUA to total**	Self-Finan-	Total	Propn. PUA to total**
Kancheepuram	58	58	25.33	63	63	25.93	64	64	25.70
Thiruvallur	27	27	11.79	27	27	11.11	23	24	9.24
Coimbatore	17	20	7.42	18	21	7.41	21	24	8.43
Namakkal	10	10	4.37	10	10	4.12	14	14	5.62
Vellore	11	12	4.80	11	12	4.53	11	12	4.42
Thirunelveli	10	11	4.37	10	11	4.12	11	12	4.42
Kanniyakumari	7	7	3.06	10	10	4.12	11	11	4.42
Thiruchirappalli	9	10	3.93	10	11	4.12	10	10	4.02
Erode	9	9	3.93	9	9	3.70	8	8	3.21
Virudhunagar	5	5	2.18	5	5	2.06	8	8	3.21
Pudukkottai	8	8	3.49	8	8	3.29	7	7	2.81
Villupuram	6	6	2.62	6	6	2.47	6	6	2.41
Sivagangai	5	6	2.18	5	6	2.06	6	7	2.41
Thiruvannamalai	6	6	2.62	6	6	2.47	5	5	2.01
Dindigul	5	5	2.18	5	5	2.06	5	5	2.01
Thoothukudi	4	4	1.75	4	4	1.65	5	5	2.01
Other districts*	32	37	14.0	36	41	14.8	34	39	13.7
Tamil Nadu	229	241	100	243	255	100	249	261	100

Note: * Districts having less than 5 self-financing colleges are not reported in the table. This districts include Thanjavur, Salem, Cuddalore, Madurai, Perambalur,Chennai, Dharmapuri, Nagapattinam, Ramanathapuram, Theni, Thiruvarur, Krishnagiri, Karur, and The Nilgiris .

** indicates proportion of private unaided colleges in a district to that of the total private unaided colleges in the state

Source: Policy Notes, Higher Education, 2003-04; 2004-05 and 2006-07.

The next highest number of private engineering colleges are located in Coimbatore having 21 colleges covering eight percent of the total private unaided engineering colleges. It clearly emerges that not only the private deemed universities but also the private engineering colleges breed in and around Chennai and Coimbatore, the two business and industrial centers in the state. On the contrary, the backward districts neither have a government or aided nor private engineering colleges. This brings out the fact that the private sector flourishes only in those districts which are economically prosperous and also where the

public investment has been made not only in the higher educational institutions but also in the infrastructure facilities such as good roads, connectivity, airports, etc.

III. 1. i.(b) Number of Intake by Location

Similarly, at the institutional level, districts in and around Chennai contribute to 35 percent of the total approved intake of students in private engineering colleges in the state. A distinct trend from the institutional location is that except these five districts listed in Table 12, a large number of districts having less than five percent of the total intake indeed contribute to about half of the total intake. The details of those districts are presented in Appendix Table-A2. It presents a paradoxical situation that about one third of the institutions and enrolment is concentrated in and around Chennai, yet half of the approved intake is distributed across the remaining 25 districts. Within these 25 districts, ten districts, contribute less than one percent of the total intake in private engineering colleges.

Table 12
Number and Proportion of Approved Intake in Private Unaided Engineering Colleges in Tamil Nadu by districts in 2005-06 and 2006-07

District	2005-06			2006-07		
	PUA	total	% pua to total	PUA		% pua to total
Kancheepuram	14653	14653	16.8	16917	16917	16.7
Chennai	10667	10685	12.3	12073	12091	11.9
Coimbatore	7488	10310	8.6	9413	12344	9.3
Tiruvallur	6249	6249	7.2	7919	7919	7.8
Namakkal	4772	4772	5.5	6218	6218	6.1
Districts Less than 5 % share *	43178	44676	49.4	49015	50391	48.1
Tamil Nadu	87007	91345	100	101555	106140	100

Note:* Details of the districts with less than five per cent share is reported in Appendix table A2
Source: Based on AICTE website downloaded in June, 2007

III.1.ii. Background of Sponsors

As per the policy note 2008-09, the state houses 249 self-financing engineering colleges. An attempt has been made here in order to understand the background of sponsors of these colleges in the state. As noted earlier, the individual websites of about 43 self-financing engineering colleges (courtesy, tamilnow.com) are the main source of information. Among them, 35 colleges provide some information about their background, which can be broadly grouped under four categories, viz., *minority institutions* – either Christian, Muslim, or

Telugu Linguistic minority institutions; *chain of institutions* – having at least more than five educational institutions under the same trust; *industrial background*, and *others*[5] (see appendix Table - A3). It is to be noted that these grouping is among the sub-sample of 34 colleges in which eight are minority institutions.

Among these eight minority colleges, three institutions own more than two educational institutions. Besides these three colleges, another 17 colleges run a minimum of five and above educational institutions. For instance, Arulmigu Meenakshi Amman College of Engineering under Meenakshi University runs 23 educational institutions in the state as per the information provided in their websites. Yet another Vel's group of institutions, which began with the Vel's College of Pharmacy in 1992, became a group now with 11 different colleges on three campuses in and around Chennai. They also offer a one-year Diploma in Nautical Science, and a two-year Higher National Diploma in Nautical Science. Students of the Higher National Diploma spent the first year at VGAMS, and the second year at Glasgow College of Nautical Studies (GCNS), U.K. Vel's Academy of Maritime Education and Training (VAMET) offers B.E. in Marine Engineering, a one-year Graduate Mechanical Engineering, a two-year Diploma in Mechanical Engineering, and a Higher National Diploma in Marine Engineering. Students of Higher National Diploma spend the first year at VAMET and the second year at GCNS, U.K. These courses are affiliated to Vinayaka Mission Institute of Technology, a deemed university at Salem. All the courses at VAMS and VAMET are residential.

Another eight colleges are under the industrial category ranging from software to real estate. In one college information regarding the political background was visible. Yet another five colleges fall in other category wherein no specific similarity could be found among them. All of these are single institutions run by people from different backgrounds.

[5] It is indeed difficult to assign some of the colleges into a particular group for instance only minority institutions but runs more than three educational institutions. Similarly, the colleges which run many educational institutions do have industrial and political background as well. That real estate business people also run an engineering college.

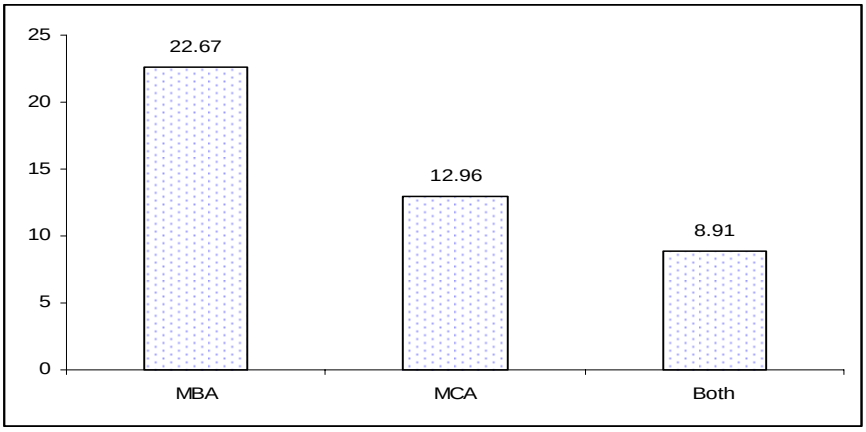
III.1. iii. Affiliation

One of the earliest technological universities to be established in the country is Anna University. All the private engineering colleges are affiliated to Anna University. Besides, the University has four constituent colleges. Also affiliated to it are five government-run engineering colleges and three government-aided ones. Almost all the self-financing colleges in the state are affiliated to public universities or part of the private universities. Prior to 2001, the private engineering colleges were affiliated to Madras University. But with the policy change since 2001, all the private engineering colleges in the state are now affiliated to Anna University as there is only one state technical university in the state besides a number of mushrooming private engineering or multi-disciplinary universities.

III.1. iv. Single and Multiple Discipline Institutions

The market forces have become very active and apparent within the private engineering colleges. In the total number of 249 self-financing engineering colleges in the state, 23 percent of them provide an MBA course which is multi-disciplinary. Similarly another 13 percent of private colleges provide MCA. About nine percent of the total private engineering colleges offer both the courses (see Chart 4).

Chart 4
Percentage of Self-Financing Engineering Colleges offering MBA and MCA among Total Self-financing Colleges in Tamil Nadu

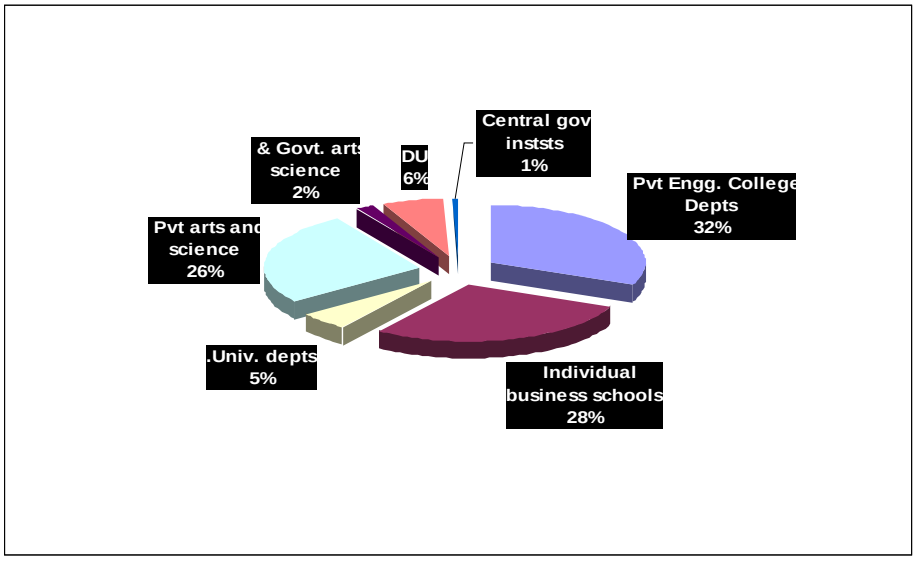


Source: based on AICTE website, downloaded in June 2007

It may be found that the single discipline engineering colleges transform into a multiple discipline institutions by adding management and applied courses like MCA (Master of Computer Applications) which are again market oriented.

Looking at 146 management institutions in the state only 41 (28 percent) are single discipline institutions in Tamil Nadu. The remaining 72 percent of the institutions are part of the already existing engineering colleges. This comprises 32 percent of government (which are few in number) and private unaided colleges. Another 26 percent of the institutions are under the category of private arts and science colleges. That denotes the extent of private sector participation in the existing self-financing institutions. Government arts and science colleges, university departments constitute another seven percent of the management institutions. This indicates the privatization of already very few public colleges and universities (see Chart 5).

Chart 5
Type of Management Institutions in Tamil Nadu in 2005-06



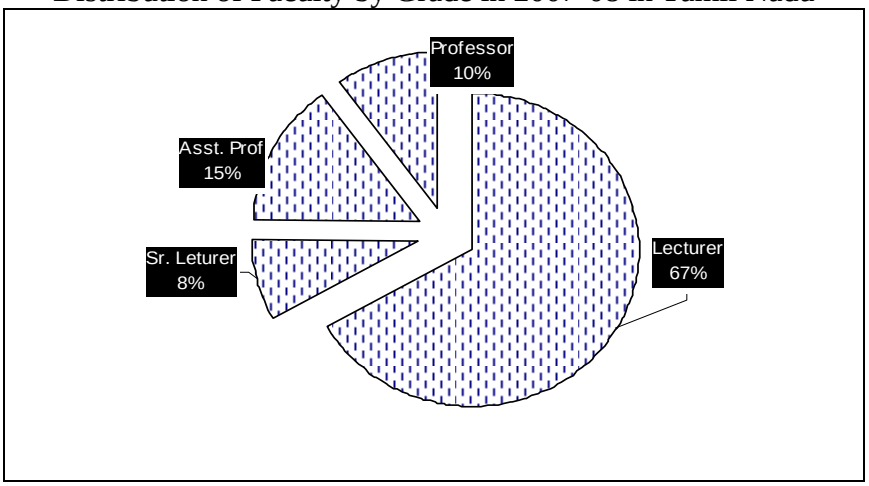
Source: Based on Saravanan (2007)

III.1. v. Size and Composition of Faculty at Different Levels and Qualifications

With regard to teachers in engineering colleges, there is no published information available on the numbers and many other characteristics of teachers such as their grade and qualifications, years of experience, salary, etc. An attempt has been made here to collect the information on teachers in self-financing engineering colleges in Tamil Nadu. The websites

of 17 colleges provided information on teachers by grade or designation and qualification. Among these 17 colleges very few provided information on experience, age, and salary details. The available information is based upon a total sample of 2,172 teachers teaching in 17 self-financing engineering colleges in Tamil Nadu. However, the information on teachers by grade was available only from 1,708 and the grade wise distribution suggest that a majority of them (67 percent) are at the lecturer level (see Chart 6). Senior lecturers constitute another eight per cent, who are likely to be in the teaching profession. Many of them join at the entry level as they could not find any other immediate job offers. The assistant professors with at least more then five years of experience constitute another 15 percent. The professor level constitute a mere 10 percent who are also in many of the cases heads of the departments.

Chart 6
Distribution of Faculty by Grade in 2007-08 in Tamil Nadu



Source: based on websites of sample colleges

Technical education was facing acute shortage of qualified faculty. “In engineering alone, the demand is for 1.20 lakh teachers, but the system today has hardly 7,000 Ph.Ds, 20,000 M.Techs and the rest fresh B.Tech degree holders. This is mainly because engineering graduates consider teaching as the last career option. (The Telegraph, 06. Feb, 2006). Because of the rapid growth of professional education, there is an acute shortage of experienced and qualified faculty, on account of which most of the colleges have to depend heavily on fresh graduates and post graduates. From the data available on teachers with a sample of 1,708 at various grades and by qualification reveal that about 50 percent of the lectures hold PG qualification (see Table 13). Another 30 percent are with UG qualification.

Above the lecturer level, PG qualification becomes a pre-requisite. Senior lecturers having PG qualification constitute above 60 percent. Another 30 per cent hold above PG level qualifications either M.Phil. or Ph.D. It may also be noted that teachers holding M.Phil. are primarily from non-engineering disciplines. At the assistant professor level, 57 percent of the teachers have PG qualification and another 38 hold above PG qualification. Unlike the middle and junior grades, at the professor level above 50 percent of the teachers have a doctorate. It may be noted that very few colleges provided the information about the part-time and visiting faculty. Even if reported, such part-timers are found to be very few.

Table 13
Percentage of Faculty by Grade and by Qualification in the Sample Self-financing Engineering Colleges in Tamil Nadu

Grade	UG	PG	M.Phil.	Ph.D.	Total	Colleges
Lecturer	32.5	49.3	16.4	1.7	1143	17
Sr. Lecturer	7	62.2	17.5	13.3	143	15
Asst. Prof	5.6	56.8	20	17.6	250	17
Professor	4.7	30.2	12.8	52.3	172	17
All	23.6	49.6	16.7	10.1	1708	17

Source: based on websites of sample self-financing colleges downloaded in May-June 2008

Attracting qualified students into teaching is a challenge in itself, but retention of good qualified teachers is a major problem. Even though there is no information available on mobility of teachers, some trends can be deciphered based on the distribution of years of experience of teachers by grade. Very few colleges provide information on the experience of teachers that in the 43 colleges, only seven colleges provide the details of years of experience for about 509 teachers that is only 30 percent of the information available on teachers by grade (see Table 14). Major share of the lecturers (61 percent) are with less than three years of teaching experience at the lecturer level. Another 27 percent have experience between four to seven years of experience. But 45 percent of the senior lecturers have four to seven years of experience. Similar picture can be observed at the assistant professor level as well. As they move up on the grade, the years of experience is also high. At the professor level, majority of them (above 60 percent) have more than ten years of experience. It may be noted that many of the professors are also heads of the departments and many of them are retired professors from other colleges.

Table 14
Percentage of Faculty by Grade and by Experience in the Sample Self-financing Engineering Colleges in Tamil Nadu

Grade	less than 3	4 to 7	7 to 10	above 10	All	No data	Grand total	Colleges
Lecturer	61.0	27.6	9.6	1.9	323	71.7	1143	6
Sr. Leturer	26.3	44.7	18.4	10.5	38	73.4	143	5
Asst. Prof	19.2	17.9	21.8	41.0	78	68.8	250	5
Professor	5.7	20.0	10.0	64.3	70	59.3	172	7
All	44.4	26.3	12.2	17.1	509	70.2	1708	7

Source: based on websites of sample self-financing colleges downloaded in May-June 2008

Competent faculty can be retained only at higher and attractive levels of salary which is a serious hindering factor in the private engineering colleges. With very limited salary data available from the websites that only three colleges provide information for about 149 teachers, it can be found that the minimum salary of a lecturer is as low as Rs.3,500 which is one fifth of the salary paid by the State at the entry level (see Table 15). The maximum salary paid at the lecturer level is Rs. 20,000 and the average salary is Rs.9,680. Similarly, the salary at other levels is also lower than the state pay and much lower than the pay that would have otherwise been available in the market.

Table 15
Average Salary by grade in the Sample Self-financing Engineering Colleges in Tamil Nadu (*in Rs.*)

Grade	Minimum	Maximum	Average	All*	No data**	Grand total*	Colleges*
Lecturer	3500	20000	9680	131	88.5	1143	3
Sr. Leturer	14750	--	--	1	99.3	143	1
Asst. Prof	13360	34000	19570	10	96.0	250	1
Professor	6550	33860	23286	7	95.9	172	2
all	9540	29287	17512	149	91.3	1708	3

Note: * in numbers; ** in per cent to the grand total
Source: same as the above table.

III. 1.vi. Infrastructure

The private institutions invested heavily on the physical infrastructure. As far as the area of the campus is concerned, the land area ranges from 25,000 square meter to a vast 800 *acre* campus (see Table 16).

Table 16
Extent of Campus in the Sample Self-financing Engineering Colleges in Tamil Nadu

Sl. no	Name of College	Area of campus
1	Annai Mathammal Sheela college of Eng	100 acre
2	Arunai Eng of College	110 acres of land, built-in area of 75,000 Sqm
3	Asan Memorial College	12 acres
4	Bannari amman Institute of Tech	165 acres in Built-up area of 11 lakh square feet
5	Sri Sairam Engineering College	25,000 sq. meters
6	Adhiyamaan College of Eng	250 acre
7	Coimbatore Institute of Eng	26.5 acres
8	Sakthi Mariamman Engineering	27.9 acre
9	B.S Abdur Rahman Eng College	60 acres
10	Aarupadai Vedu	60 acres
11	Anjalai Ammmal College of Eng	65 acres
12	Adhiparasakthi	800-acre
13	K.C.G College of Tech	50 acres

Source: same as the above table

This is indeed one of the attractions. Besides the huge area, they invested on a number of facilities from class rooms to AC seminar halls (see Appendix Tables A4 and A5). It is important to note that many of the colleges provided the information regarding the infrastructure in details as could be seen from the Appendix Tables A4 and A5. On the contrary, the investment on human infrastructure was neglected as seen earlier. Further, the state government has also granted incentives for the colleges that have created infrastructure well above the minimum prescribed by the All-India Council for Technical Education.

To sum up, the private unaided engineering colleges and their enrolment have been located in economically prosperous places and where already government has invested, yet the intake by location presents a paradoxical situation that about one third of the institutions and enrolment is concentrated in an around Chennai, yet half of the approved intake is distributed across the remaining 25 districts. The background of sponsors vary. A majority of them own many educational institutions as a group or chain of institutions and the number in these chain of institutions keeps growing over the years. Similar growth can be found in terms of transformation of single discipline engineering colleges into multiple discipline institutions by adding management and applied courses which are market oriented. With very limited information available on teachers, it can be said that fresh graduates and post graduates at a lower salary manage the teaching. The research qualification of the faculty is

limited. The information on physical infrastructure is available from more than 50 percent of the colleges. As far as the extent of campus, presence of major facilities such as library, labs, etc., vary a great deal. Yet, the physical infrastructure appears to be in place.

III. 2. Major issues relating to self financing colleges

Major issues relating to self financing colleges are examined in terms of admission criteria and procedures, fees, quality, performance, performance evaluation and functioning of regulatory authorities.

III.2.i.Admission criteria and procedures

III.2.i . (a).Eligibility Criterion

The Government of Tamil Nadu has abolished common entrance test which was the eligibility criterion for admission till 2006-07. Due to various factors, there has been a large number of vacancies under payment category and this is on the increase year after year, putting the managements of engineering colleges under financial strain. The Government has reduced the eligibility marks followed by representations from the Tamil Nadu Self-Financing Engineering Colleges Association (Chennai, The Hindu, July 19, 2007). Hence, in a Government Order in 2007, the minimum eligibility marks for admission into the engineering colleges has been reduced. Accordingly, the minimum eligibility marks will be (with basic qualification of higher secondary (academic)/higher secondary (vocational)/diploma holders) 60 percent average in the related subjects for Other Caste (OC), 55 percent average in the related subjects for BC, 50 percent average in the related subjects for Most Backward Caste (MBC)/De Notified Caste (DNC), and mere pass for Scheduled Caste (SC)/Scheduled Tribe (ST)[6]. There is no variation as far as the private engineering colleges are concerned in terms of the eligibility criterion for admissions (see Table 17).

[6] as per GO No. 115 dated 25.05.2007

Table 17
Minimum Required Percentages of Marks for Admission in the Sample Self-financing Engineering Colleges in Tamil Nadu

Sl. No.	Colleges	OC	BC	MBC	SC/ST
1	A.V.C Collegeof Engineering	60%	55%	50%	mere pass
2	Adhiparasakthi	60%	55%	50%	mere pass
3	Adhiyamaan College of Eng	60%	55%	50%	Pass in + 2
4	Anjalai Ammmal College of Eng	60%	55%	50%	Mere Pass
5	Asan Memorial College	60%	55%	50%	Mere Pass
6	B.S Abdur Rahman Eng College	60%	55%	50%	Pass in + 2
7	Coimbatore Institute of Eng	60%	55%	50%	Mere Pass
8	Dhanalakshmi College of Eng	60%	55%	50%	Mere Pass
9	K.S.R College of Eng	60%	55%	50%	Mere Pass
10	S.K.R Engineering College	60%	55%	50%	Pass in HSC or equivalent
11	St. Peter's Engineering College	60%	55%	50%	Pass in + 2

Source: Same as the above table

III.2.i. (b). Seat Sharing

Unaided engineering colleges in Tamil Nadu entangle on the issue of seat sharing with the government for admissions under the management quota. There are two categories. Category-I consists of seats in government engineering colleges and seats in aided courses in government aided engineering colleges. Category-II comprises seats in the self supporting courses in government aided engineering colleges and seats surrendered by the self financing engineering colleges. 50 percent seats are filled up by the state governments and the remaining seats by the management. The self-financing engineering college Association also wants that admission under free-seat and payment seat categories ought to be maintained equally to sustain the economic viability of the self financing colleges. The unaided non-minority engineering colleges gave an undertaking to surrender 50 percent of their sanctioned seats to the government (that is filled by the single window system under Category-II), and the minority-run colleges' undertaking stated that they would surrender 30 percent of their intake to the government. The Higher Education Department had proposed that the colleges surrender 70 percent of the seats to the single window pool. The seat sharing varies across institutions. Some of the colleges surrender about 92 percent of the seats to government allotment (see Table 18). It could be because in the initial years of establishment of the colleges, the seats are being surrendered to government. Once the colleges establish themselves, they slowly reduce the number of seats surrendered to the government.

Table 18
Percentage Share of Government and Management Quota in Intake of Students in the Sample Self-financing Engineering Colleges in Tamil Nadu

Sl. No	College Names	Govt. Quota			Management Quota		
		2004-05	2005-06	2006-07	2004-05	2005-06	2006-07
1	Adhiparasakthi	51	55	--	49	45	--
2	Anjalai Ammmal College of Eng	60	49	44	40	51	56
3	Coimbatore Institute of Eng	81	43	45	19	57	55
4	Adhiyamaan College of Eng	--	30	49	--	70	51
5	Bhajarang Eng College	46	43	52	54	57	48
6	Sakthi Mariamman Engineering	--	52	56	--	48	44
7	S.K.R Engineering College	--	46	59	--	54	41
8	St. Peter's Engineering College	92	46	62	8	54	38
9	B.S Abdur Rahman Eng College	37	40	63	63	60	37
10	K.S.R College of Eng	56	65	64	44	35	36

Source: Same as above table

III.2.ii. Fees

To finance the physical and human infrastructure fee income is the main source for private unaided institutions. From the private institutional perspective, these institutions charge commercial fee rates and "capitation" fees and are neither accounted by receipts nor follow a transparent admission procedure. In addition, the private institutions collect exorbitant and compulsory fees of many forms and kinds in the name of transport, canteen, library, text books, mark sheets, caution deposits; degree certificates; hall tickets; association fees, etc. It would be extremely difficult to estimate these costs based on very limited and scanty knowledge except from the NSSO[7].

Tamil Nadu Government has revised the fees payable by students for admission to self-financing engineering colleges. The revised fee is fixed under two heads — tuition fees and development fees. The tuition fees include special fees and laboratory fees. It is also be inclusive of library expenditure, maintenance expenditure, training cost and contingent expenditure such as stationery, sports, water and other recurring expenditure. The institutions are not permitted to collect any other fees. According to the GO, the fee per annum for B.E., B.Tech., M.E., M.Tech. and MCA in self financing (unaided) engineering colleges will be: Rs 15,250 (Rs 12,250 tuition fees and Rs 3,000 development fees) for free seat category and

[7] There is some information available on the Private or Unorganized Education Services in terms of their Size, type, workers by full time and part time and by male and female, income generated (value added) by enterprise and by worker (NSSO, 2003a; 2003b). The major problem here is the whole of education sector is considered here without really looking at them by levels of education.

Rs 49,750 per annum (Rs 41,750 as tuition fees and Rs 8,000 as development fees) for the payment seat category. Whereas the details of fee, as approved by the State Fee Committee, for the self-financing engineering colleges amount to Rs.52,500 (see Table 19).

Table 19
Fee as Prescribed by Government and State Fee committee in Tamil Nadu

Details	State fee committee*	Govt Order**
Admn. & Tuition Fee	40000	41750
Text Books	3000	
Insurance Postage Charges P & T	4500	
Self Devl. Course	1000	8000
Caution Deposit	4000	
Total	52500	49750

Note: * correspond to the year 2006-07; ** correspond to the year 2004-05
Source: Based on websites

The variation with the self-financing colleges in terms of the ratio of the fees of management seat to free seat is 3.26 times higher. For the MBA course in self financing (unaided) engineering colleges the total fees will be Rs 27,000 (Rs 24,000 as tuition fees and Rs 3,000 as development fees) for the free seat category and Rs 44,000 (Rs 36,000 as tuition fees and Rs 8,000 as development fees) for the payment seat category. In the case of Government-aided engineering colleges, the total fee to be charged is Rs 8,500 inclusive of Rs 4,000 as tuition fees, Rs 1,500 as special fees and Rs 3,000 as development charges. Between government and self-financing free seat, the variation of fees in terms of the ratio of the fees of government colleges to free seat in self financing colleges is 3.17 times higher. Similarly, the variation of fees in terms of the ratio of the fees of government colleges to management seat in self financing colleges is as high as 5.17 times higher. But the fees charged as provided in the websites of various colleges vary. The minimum fee charged for UG is Rs.32,500 in nine colleges and a maximum fee is Rs.77,500 (see Table 20). Similarly, for PG the minimum fee is Rs.25,000 and a maximum of Rs.50,000. It is to be noted that these are besides the capitation fee.

Table 20
Fees in the Sample Self-financing Engineering Colleges in Tamil Nadu (in Rs.)

Sl no	Name of Colleges	U.G	P.G	Others
1	A.V.C College of Eng	32750		
2	Anjalai Ammmal College of Eng	45000	29000	
3	Annai Mathammal Sheela college of Eng	32500	42500	35,000 for MCA per anm
4	Asan Memorial College	32500		
5	Coimbatore Institute of Eng	32500		As per the govt norms
6	Dhanalakshmi College of Eng	32500	25000	
7	Dr.Mahalingam College of Eng	32500	25000	
8	Easwari Eng College	40000		
9	GKM college of Eng	32500	30000	
10	Hindustan College of Eng			as per TN govt norms 40,000
11	Jaya Engineering College			33,200 to 63,200
12	K.S.R College of Eng	32500		25,000 Per Year for MBA
13	Karpaga Vinayaga College	32500	25000	22,500 Per Year for ME
14	King's Eng College	48550		
15	P.R Engineering College'	32500	as per govt norms	
16	S.K.R Engineering College			32,500 + other fees
17	S.S.N College of Engineering	77500	77500	
18	Sakthi Mariamman Engineering			as per state govt norms
19	Sri Sairam Engineering College	40000		50,000 for MBA & MCA
20	Sri Venkateswara College of Eng	40000		As approved by state fee committe
21	St. Peter's Engineering College	40000		32,500 for other p/y
22	Vel Tech Eng College			As per govt norms
23	Velammal Engineering College	40000	32500	MCA Fee 25,000
	Average	38683	35813	

Source: based on websites of sample self-financing colleges downloaded in May-June 2008

III.2.ii.(a). Efforts against Collection of Capitation Fee and Excess Tuition Fee

All self-financing engineering colleges in the State are now under Government scrutiny with the Directorate of Technical Education intensifying its drive against the collection of capitation fee and tuition fee in excess of what has been prescribed. Recently, Department of Technical Education (DOTE) officials conducted surprise checks in 142 colleges and released a list of institutions found collecting excess tuition fee. The self-financing colleges are divided into seven zones and formed 81 teams, headed by principals of government engineering colleges, to inspect these institutions. *Suo motu* checks were conducted and followed up with cross-checking with the list of students allotted seats in these institutions through Anna University's counseling.

DOTE officials found evidence of 14 colleges violating the prescribed fee structure. The sample colleges among them are, Vel Sri Rangarajan Sakunthala College of Multimedia, Vel Tech Engineering College and Vel Sri Rangarajan Sakunthala Hitech Engineering College, Dhanalakshmi College of Engineering, Sri Sairam Engineering College and Adhiyaman College of Engineering. The surprise checks could find that a donation of Rs. 5 lakh was paid by a student through demand draft to a trust was an unregistered entity linked to the college. The government may initiate legal action against the college and also ask AICTE to cancel recognition from next year.

The high cost of technical education is a major issue. The annual fee for a "payment seat" in self-financing colleges in Tamil Nadu amount to more than Rs.50,000. This is in addition to the capitation and other fees that many private colleges invariably charge. A major disturbing feature has been a lack of motivation on the part of some educational entrepreneurs to serve the cause of education leading in turn to a lack of commitment to intellectual excellence. This was because their focus was ‘profit making’. Since the norms for fixation of fees are not adhered, the quantum of fees charged has no rational basis and it is an attempt to cover more than the full cost of engineering education. While the illegal capitation fees range from Rs. 2 to 8 lakh for some of the courses, the regular fees also vary considerably among courses and across colleges as well (Anandakrishnan, 2006). Since, private institutions are privately owned and financed, they are governed less by the state. In other words, since they are owned and financed by private groups (either business, minority, chain of institutions or family) and it is these groups that tend to govern and demand accountability (Levy, 1992) and not the academic excellence.

III.2.iii. Quality

There is wide variation in the quality of education offered by different private engineering institutions. The engineering courses are accredited by the National Board of Accreditation (NBA) an autonomous body under the AICTE. An attempt is made here to look at whether

the sample colleges have accredited[8] their courses under the NBA or not. From the information available out of 43 colleges, only (see Appendix Table A6) 29 colleges have accredited their UG and PG programmes. Among them five colleges obtained five year validity of the courses which indicate a better score (above 75 %) in the accreditation. Accredited for five years indicate an excellent/very good score, which indicates meeting all accreditation criteria or exceeding them. If accredited for three years, then it is good implying meeting the minimum criteria with deficiencies being marginal and can be improved within a short time.

However, it is to be explored whether even these 29 colleges accredited all of their courses. It needs to be further explored that in which of the colleges and which of the courses the accreditation is not valid. However, an attempt has been made here to highlight the extent of regulation of quality at the central level. As far as the incentives for colleges that have created infrastructure well above the minimum prescribed by the AICTE, the state government provides an incentive that colleges that have got accreditation from the NBA to be permitted to collect 10 percent more fees; the accredited colleges that have got `A' grade (five year validity) in five or more courses will be allowed to collect 20 percent more fees. However the same is not mandatory to run the courses at the state level.

Accreditation of programmes is to regulate quality from the supply side. An outcome of quality can be known from the number of successful candidates who pass out from the system. An attempt is made here to look at the distribution of pass percentage of self-financing colleges, a proxy measure of quality. In Tamil Nadu, the minimum percentage of mark required to pass the final examination is about 40 percent. The average pass rate was 42.6 percent for all the 229 private unaided engineering colleges (see Table 21). It may be noted that only 21 percent of the private unaided colleges could get more than 50 percent pass rate. 32 out of 229 private unaided engineering colleges had less than 16 percent pass

[8] The evaluation parameters for accreditation are elaborate and consist of eight components viz, organization and governance, financial resources, allocation and utilization, physical resources, human resources, human resources-student welfare, teaching-learning processes, supplementary processes (extra curricular) and R&D and interaction effort having the total score of 1000.

rate. In majority of the colleges that is 65 percent of the private unaided colleges, the pass percentage ranged between 25 and 50 percent.

Table 21
Pass percentage of Private Unaided Engineering colleges in Tamil Nadu 2003-04

Pass % Range	No. of Colleges	No. Appeared	No. Passed	Pass %
80-100	0	-	-	-
70-80	5	6669	4983	74.7
60-70	21	24826	15872	63.9
50-60	22	21861	11866	54.3
40-50	31	24457	11168	45.7
30-40	66	42502	15087	35.5
20-30	52	26680	6926	26.0
10-20	27	10364	1629	15.7
0-10	5	1343	132	9.8
Total	229	158702	67663	42.6

Source: Anna University as reported in Anandakrishnan (2004)

Lack of qualified, experienced and competent teachers is found to be the major factor as shown earlier. The evidence clearly brings out that private sector has increased stupendously, but, their quality is extremely fragile as there is no accountability of these institutions in terms of performance. While a few of them make significant contributions to the need for a highly skilled work force, others merely exploit the situation.

III.2.iv. Performance

Performance of the institution in terms of the job market absorption has been examined here. Most private institutions claim to be commercially-oriented, preparing graduates for the job market. Professional institutions promise potential students lucrative positions in their field of choice upon graduation. The number of students placed in various companies include a minimum of 25 to a maximum of 1,444 in the year 2007 (see Table 22).

Table 22
Number of Students placed and the Number of companies visited for Campus Interviews across the Sample of Self-financing Engineering Colleges in Tamil Nadu

S.NO	Name of the College	2005	2006	2007	Visited No. of Companies*
1	A.V.C College of Eng	70	101	132	
2	Aarupadai Vedu				30
3	Adhiparasakthi	44	83	152	
4	Adhiyamaan College of Engg	40	121	151	86
5	Anjalai Ammmal College of Engg	27	56	76	
6	Annai Mathammal Sheela college	146	146	146	
7	Arunai Eng College	78	158	166	27
8	B.S Abdur Rahman Eng College	308	353	409	105
9	Bannari amman Institute of Tech				136
10	Dhaanish Ahmed College of Eng				25
11	Dhanalakshmi College of Eng	29	48	170	
12	Dr. M.G.R Group of College		142	318	
13	Dr.Mahalingam College of Eng	182	337	258	55
14	Hindustan College of Eng	-	-	-	49
15	Jaya Engineering College	149	88	117	50
16	Jeppiaar Eng College			211	51
17	Jerusalem College of Eng		189	274	45
18	K.C.G College of Tech				50
19	K.S.R College of Eng	107	187	213	
20	King's Eng College		159		
21	P.R Engineering College'		147		18
22	S.S.N College of Engineering	425	471	504	-
23	Sakthi Mariamman Engineering	41	29	35	
24	Sathyabama Institute of Science and Tech			1444	132
25	Sri Venkateswara College of Engg				28
26	St. Peter's Engineering	104	138	257	-
27	vel Tech Engineering college	-	-	-	384

Note: * for campus interview
Source: based on websites of sample self-financing colleges downloaded in May-June 2008

However, this needs to be examined in terms of the proportion of students placed in the total intake in the college. But no such information is available from the websites. The individual colleges report that each year the number of students they have placed in various companies keep rising except a very few which show either stagnant or declining numbers. Besides, the number of students placed, number of companies visited the college campus range from a minimum of 25 to a maximum of 384.

As an endeavor to attract students towards the private colleges, the information on average expected salary is also provided in many of the colleges' websites. The minimum

expected salary range from Rs.3500 to a maximum of Rs.18,000 per month for fresh graduates. The variation in the maximum salary is from a minimum of Rs.15000 to a maximum of Rs.56,250. Even the average expected salary ranges from Rs. 8000 to Rs.36,500 (see Table 23).

Table 23
Average expected salary in the Sample Self-financing Engineering Colleges in Tamil Nadu

S.NO	College Placement	Minimum salary	Maximum salary	Average salary
1	Adhiyamaan College of Eng	14,200	20,203	17,202
2	Anjalai Ammmal College of Eng	11,500	15,000	8,000
3	Annai Mathammal Sheela college of Eng	6,000	30,000	18,000
4	B.S Abdur Rahman Eng College	10,000	41,000	25,500
5	Dhanalakshmi College of Eng	15,000	25,000	20,000
6	Dr.Mahalingam College of Eng	14,583	26,667	20,625
7	GKM college of Eng	6,000	18,000	12,000
8	Jaya Engineering College	3,500	22,500	13,000
9	K.S.R College of Eng	9,000	25,000	17,000
10	King's Eng College	6,000	18,000	12,000
11	P.R Engineering College'	8,000	22,000	15,000
12	S.S.N College of Engineering	16,667	56,250	36,500
13	Sakthi Mariamman Engineering	14,583	25,833	20,208
14	vel Tech Engineering college	18,000	26,500	22,500

Source: based on websites of sample self-financing colleges downloaded in May-June 2008

III.2.v. Performance Evaluation

The State has the second largest intake capacity in the country in engineering education. Challenges for self-financing engineering colleges in Tamil Nadu are how to tackle decreasing demand which is to the tune of above 25 percent of the intake capacity. Based on the market forces of demand and supply, colleges are now offering much lower fees (price) than that fixed by the Government to attract students and yet there aren't many takers (The Hindu, July 28, 2003). In 2003-04, the seats remained vacant in self-financing colleges was 33 percent of the sanctioned seats(see Table 24).

Table 24
Sanctioned and Admitted Seats in Engineering Colleges in Tamil Nadu

	Sanctioned Intake	Admitted	Vacancy	Vacancy as % intake
1997-98	22192	22594	-402	-1.81
1998-99	22192	22873	-681	-3.07
1999-00	32735	31463	1272	3.89
2000-01	42892	38893	3999	9.32
2001-02	60470	48887	11583	19.15
2003-04	71460	48106	23354	32.68
2004-05	68190	49466	18724	27.46

Source: Statistical Hand book of Tamil Nadu, Chennai

It is because, the sanctioned intake has grown three and a half times from 22,192 students in 1997-98 to 71,460 students in 2003-04. As discussed earlier, the most prominent reason is many engineering colleges do not have trained faculty. With these serious constraints, it is surprising to find that the total number of seats have increased from 47,417 in 2003 to 69,100 in 2004 despite the fact that 21,505 seats remained vacant in 2003. Why has the capacity increased despite the steep fall in demand? This raises the structural issue of economic viability of the institutions. This kind of expansion leads to a lack of accountability by private higher education providers.

The state government and the All India Council of Technical Education have not seriously looked into permitting so many engineering colleges in the state, without relating the capacity creation for engineering education to the pattern of industrial growth in the state/country and requirements of qualified engineers. This also speaks of the approach of the Government of Tamil Nadu in promoting higher education, mainly higher technical education is to create manpower for export. There is no performance evaluation in place either by AICTE or by the state government.

It may be noted that the central and state governments stipulate on a number of major aspects from eligibility criteria, admission procedure, sharing seats, maximum fees to be charged and quality, etc., but not on the terms and conditions of recruiting teachers – the vital input for education. The self-financing colleges do not seriously follow even many of those

stipulations except the eligibility criterion. Eventually there is no performance evaluation in place.

III.2.vi. Functioning of Regulatory Authorities

Need for regulation of the private self-financing colleges from both the centre and state has to be ensured. Although the AICTE was legally equipped with sufficient powers for enforcement of standards, it has hardly lived up to the task that was envisaged for. It is important to note that the Government of Tamil Nadu plays an active role in governance if not in regulation. A couple of interventions namely single window system and abolition of common entrance test are noteworthy in this context.

III.2.vi. (a) Single Window System of Admission

The state regulation has been in an incremental approach, resulting in piece-meal additions to programs that are already in place. When private self-financing institutions came in large numbers in the eighties in the four States of Andhra Pradesh, Tamil Nadu, Karnataka and Maharashtra, there was no effective mechanism to control their functioning, nor was there a systematic admission procedure, except in Andhra Pradesh, where all seats were filled up by the Government on merit basis. In other states, 50 percent seats were filled up by the respective governments and for the remaining seats, large sums of money were collected as donations. Since the demand for admissions continued to increase and there was no effective control, the situation led to a sort of commercialization of technical education. The above situation continued even after all institutions were brought under the AICTE control. Later, the Supreme Court, in a historical judgment in 1993, defined the norms for admission and the fee structure for all self-financing engineering colleges. As per the Supreme Court directive, all admissions to self-financing private colleges are to be done by the respective state governments based on merit. 50 percent of the seats are “free seats” for which the fee structure is the same as those of government institutions in the state government (AICTE, 1999, p.151).

Following this, the State Government of Tamil Nadu has introduced a single window system of admission of students to engineering colleges during 1997–98 and streamlined the admission procedure on the basis of merit of the students. The planning and execution of the single window system of engineering admissions has been executed by the Anna University (GoTN, 2006a). However, in conducting examinations and evaluation, these colleges were under the Madras University and operating independently until 2002. In 2003, the state government brought all these colleges under the Anna University. The State Legislature has passed an Amendment Bill disaffiliating all the engineering colleges from the six general purpose universities of the State and affiliating the same to the Anna University. The Bill also contains a provision for transfer of all the Government engineering colleges to the Anna University as constituent colleges. Belatedly in 2001, the state came up with a common entrance test covering all management colleges along the line of engineering colleges when the Anna University Amendment Bill was passed. Not only the engineering colleges, but also all arts and science colleges are part of an affiliating university, whose main function is to act as a regulating and an examining body in Tamil Nadu.

III.2.vi.(b). Abolition of Common Entrance Test

The common entrance test (CET) system for admissions to professional courses in Tamil Nadu was introduced in 1984 in order to infuse transparency in the admissions process, at least with regard to the government quota seats in unaided professional education institutions. The CET system evolved over time and got its present structure in the early 1990s. Admissions to courses in medical, paramedical, engineering, veterinary and agriculture and allied sciences were based on a combination of marks obtained in the higher secondary examinations and the CET. This CET is largely urban biased and did not consider large interest and welfare of the student community. This resulted in mushrooming of coaching centres and fleecing parents in the name of entrance examination. To lessen the burden and hardship faced by students in view of CET, the government constituted a high-level expert committee headed by former Anna University Vice-Chancellor M Anandhakrishnan to recommend measures to be taken for abolition of CET from 2007-08.

Following the recommendations of the committee, the State Government enacted the Tamil Nadu Regulation of Admission in Professional Courses Act 2006 whereby the CET was abolished for students clearing the State Board Examination. The students of other boards such as the Central Board of Secondary Education were required to write the CET for admission to professional courses. It may be noted that as in 2007-08, Tamil Nadu is the only state which abolished CET. The major thrust behind the CET abolition is an attempt to place the rural students at parity with that of urban students. In addition, it is also important to note that rural Tamil Nadu's biggest provider of higher secondary education is public-funded institutions run by the state government and local bodies, wherein the quality need to be enhanced.

However, these are a few lukewarm measures taken at the state or aggregate level. Given the intensity of the nexus between high fees combined with poor quality and no accountability of the private institutions, the state does make an attempt but an effective one because of the nature of dynamic and complex relationship among education, finance and polity.

IV. Concluding Remarks

Tamil Nadu's higher education in engineering with the 70 percent share with above 50 percent share of enrollments in the private sector, still operates in a largely effectively under regulated space. The most acute problem is quality on account of lack of competent faculty. This coupled with a lack of accountability raises serious doubts as to its ability to address the huge latent demand for quality higher education in the state. As aptly put, "There is a place for the market, but the market must be kept in its place" (Krip, 2007). Hence, a more effective regulatory framework needs to be developed to address the problem of imperfect information on the quality of teaching and student learning. While improved information sharing on academic quality would be an obvious regulatory mechanism, some form of "enforced self-regulation" is needed for more effective private higher education. This would entail government incentives and sanctions designed to reform and strengthen institutional and professional mechanisms for assuring academic quality, expressed as early as in the middle of nineteenth century by J.S. Mill (1965).

Hence, it is important to regulate market through both short-term and long-term policies. In the short run, it needs to focus on ensuring quality and accountability of the private higher education system immediately. In the long run, the 'state' should raise some fundamental and forgotten intrinsic values such as positive externalities, the social purpose that higher education serves, the nation building role it performs, the public good and the human right natures of higher education are to be brought back. Given these inherent and intrinsic values of higher education, some basic questions like - Should the expansion of private higher education continue? How much responsibility does it owe to the public good? How to revive the abandoned scholarship? How to save the core of the ideals of modern higher education in the face of market forces serving private interests rather than the public good? etc., are to be the policy concerns in the middle to long run.

References:

Anandakrishnan, M. (2004). *Equity, Quality and Quantity in Higher Education, in Issues* in Higher Education, Vol. II. ICFAI University Press. Hyderabad.

Anandakrishnan, M (2006): 'Privatization of Higher Education: Opportunities and Anomalies', presented at National Seminar on Privatization and Commercialization of Higher Education, NUEPA, New Delhi, May 2, 2006.

AICTE, (1999) *Technical Education in India in Independent India: 1947-1997 A Compendium to Commemorate the 50th Anniversary of Independence,* All India Council for Technical Education, New Delhi.

Geiger L. Roger (2004), *The Publicness of Private Higher Education*, CHER Meeting: Enschede, Netherlands.

Government of Tamil Nadu (2003), *Tamil Nadu Human Development Report*, Social Science Press, Delhi.

Government of Tamil Nadu (2004), Health and Family Welfare Department, Policy Note: Demand No.18 Chapter 2, Medical Education 2004-05.

Government of Tamil Nadu (2006a), Policy Note: Demand No: 20, Higher Education, 2006-07, Higher Education Department of Government of Tamil Nadu, Chennai.

Government of Tamil Nadu (2006b), Policy Note: Legal Education, 2006-07, Tamil Nadu, Chennai.

Government of Tamil Nadu (2007a), Policy Note: Demand No: 20, Higher Education, 2007-08, Higher Education Department of Government of Tamil Nadu, Chennai.

Government of Tamil Nadu (2007b) Policy Note, 2006-07, Agriculture Department, Demand No. 5, Policy Note 2007-08).

Government of Tamil Nadu (2008), Policy Note: Demand No: 20, Higher Education, 2008-09, Higher Education Department of Government of Tamil Nadu, Chennai.

Government of Tamil Nadu, Statistical Handbook of Tamil Nadu, various issues.

Government of Tamil Nadu, Economic Appraisal of Tamil Nadu, 1999-2000 and 2000-01.

Kapur, D and P B Mehta (2004): 'Indian Higher Education Reform: From Half-Baked Socialism to Half-Baked Capitalism', working paper No 108, Centre for International Development, Harvard University, September.

Kinser K and D.C. Levy, (2006), *For-Profit Higher Education: U.S. Tendencies, International Echoes*, in International Handbook of Higher Education, ed. James J. F. Forest and Philip G. Altbach, Springer, Netherlands.

Kirp, D. (2007) The Corporation of Learning: Nonprofit Higher Education Acquires Lessons from Business, CSHE Research & Occasional Paper Series.

Levy, D. C. (1992). Private Institutions of Higher Education. In B. Clark & G. Neave (Eds.), *The Encyclopedia of Higher Education* (Vol. 2, pp. 1183-1195. New York, NY: Pergamon Press.

Levy, D.C. (2006) "The Unanticipated Explosion: Private Higher Education's global surge", C*omparative Education Review*, 50(2), 218-240.

Mill, J. S. (1965). *Principles of Political Economy With Some Applications to Social Philosophy* (Collected Works, vols. II and III). Toronto: University of Toronto Press and Routledge.

Morey, A. (2004), *Globalization and Emergence of For Profit Higher Education* Higher Education, 48(1), pp.131-150.

MHRD, *Selected Educational Statistics*, Government of India, New Delhi, various issues.

MHRD, Analysis of Budgetary Expenditure on Education 2004-05, various issues, Government of India, New Delhi.

NSSO, (2003a*), Unorganised Service Sector in India 2001-02, Salient Features*, Report No.482, NSS 57th Round, Government of India.

NSSO, (2003b), *Unorganised Service Sector in India 2001-02, Characteristics of Enterprises*, Report, No. 483, NSS 57th Round, Government of India.

NSSO (2006), *Status of Education and Vocational Training in India 2004-05*, Report No 517, NSS 65th Round, Government of India.

Saravanan, S. (2007) A Study on Mush-room growth of Two-year Management Programme and its Impact on Quality of Management Education in Tamil Nadu, W.P. No.2007-02-01, February 2007, Indian Institute of Management, Ahmedabad, India

Shattock, Michael (2001), "The Machinery for Determining Academic Pay: Illusion and Reality in a `Nationalised Industry'**:** *Higher Education Quarterly*, Volume 55, Number 1, January, pp. 62-77(16)

Singh, A (2004), Challenges in Higher Education, *Economic and Political Weekly*, vol. 34 (21), pp. 2155-58.

The Telegraph, 06 February, 2006

www.ugc.nic.in

www.aicte.nic.in

www.tnmgr.univ.org

www.tnau.ac.in.

www.nba.org

Appendix Tables

Table A1

Number of Engineering Institutions by Management and by Districts in Tamil Nadu in 2006-07

	Districts	Govt	PA	PUA	% PUA to total
1	Kancheepuram			40	17.17
2	Chennai	1		23	9.87
3	Coimbatore	2	3	18	7.73
4	Tiruvallur			19	8.15
5	Namakkal			14	6.01
6	Tiruchirappalli	1		10	4.29
7	Kanniyakumari			11	4.72
8	Erode			7	3.00
9	Virudhunagar			7	3.00
10	Vellore	1		10	4.29
11	Tirunelveli		1	8	3.43
12	Tiruvannamalai			6	2.58
13	Madurai			5	2.15
14	Villupuram			6	2.58
15	Dindigul			5	2.15
16	Pudukkottai			6	2.58
17	Sivagangai			5	2.15
18	Thanjavur			4	1.72
19	Salem	1		3	1.29
20	Perambalur			3	1.29
21	Thoothukkudi			4	1.72
22	Cuddalore			3	1.29
	Others *	1		16	6.87
	Tamil Nadu	7	4	249	269

*Others include Karur, Dharmapuri, Ramanathapuram, Nagapattinam, Theni, Chidambaranar, Tiruvarur, Mayiladuthurai, The Nilgiris, and Muthuramalingam, Krishnagiri having less than one % share of institutions and hence not reported in this table, together they account for 6.87 % with 16 PUA colleges

Source: Based on information downloaded from www.aicte.org in June, 2007

Table A2

Number and Proportion of Approved Intake of Less than five percent in total Private Unaided Engineering Colleges in Tamil Nadu by districts in 2005-06 and 2006-07

District	2005-06			2006-07		
	PUA	total	% PUA to total	PUA		% PUA to total
Tiruchirappalli	4041	4341	4.6	4507	4807	4.4
Kanniyakumari	3486	3486	4	4326	4326	4.3
Erode	3489	3489	4	3963	3963	3.9
Virudhunagar	3212	3212	3.7	3458	3458	3.4
Vellore	2911	3031	3.3	3364	3484	3.3
Tirunelveli	2550	2986	2.9	3084	3658	3
Tiruvannamalai	2625	2625	3	2991	2991	2.9
Madurai	2345	2345	2.7	2345	2345	2.3
Villupuram	1844	1844	2.1	2264	2264	2.2
Dindigul	2083	2083	2.4	2083	2083	2.1
Pudukkottai	1770	1770	2	1950	1950	1.9
Sivagangai	1405	1405	1.6	1585	1585	1.6
Thanjavur	1219	1219	1.4	1459	1459	1.4
Salem	1128	1510	1.3	1368	1750	1.3
Krishnagiri	1068	1068	1.2	1308	1308	1.3
Perambalur	810	810	0.9	1236	1236	1.2
Thoothukkudi	1005	1005	1.2	1086	1086	1.1
Sub-total	36991	38229	42.3	42377	43753	41.6
Others*	6187	6447	7.1	6638	6638	6.5
Tamil Nadu	87007	91345	100	101555	106140	100

* others include Cuddalore, Karur, Ramanathapuram, Dharmapuri, Nagapattinam, Theni, Chidambaranar, Tiruvarur, Mayiladuturai and The Nilgiris having less than one % share of approved intake and hence not reported in this table, together they account for 7.1 % and 6.5 during 2005-06 and 2006-07 respectively.

Source: Based on information downloaded from www.aicte.org in June, 2007

Table A3
Background of the Sponsors of a Sample of Self-financing Engineering Colleges in Tamil Nadu

Sl. No	Name of the College	Mission	Background
	Minority		
1	Jaya Engineering College	Telugu Minority	Arts and Science college, business, dentistry and paramedical -pharmacy and physiotherapy.
2	Dhaanish Ahmed College of Engineering	Muslim minority	Ayanavaram Educational Trust in 1980 - aim of promoting, social, technical and higher education.
3	Bhajarang Engineering College, Alwarthirunagar	Telugu Linguistic Minority	Bhajarang Educational & Social Trust, a Telugu Linguistic Minority Trust established Engg, Arts Colleges, Medical Colleges and other instns
4	Jerusalem College of Engineering, Pallikkarani	Charity	Jerusalem Educational Trust in 1993
5	St. Peter's Engineering College	Philanthropists	St. Joseph Educational Trust in 1992
	Chain of Institutions		
6	Arulmigu Meenakshi amman college of Eng (23)	Deemed univ	Meenakshi Ammal Trust, part of Meenakshi Univeristy
7	S.R.M Institute of Science & Tech (17)	S.R.M. Group, DU, family	35 year old SRM Group of Educational Institutions, sponsored by the Valliammai Society 3 campus in Chennai and a Delhi campus, campus also has a 3 star Hotel "Royal Southern" other institutions, Blossom Infotech, Geetha Constructions, Chennai, SRM Benefit Fund Ltd., SRM Eswari Travels & Tours India (P) Ltd. SRM Hospital - SRM Printers, SRM Systems & Software, Royal Southern Hotels
8	Sri Sairam Engineering College (16)	various other enterprises such as Real Estate, Industry	Established in 1995, Sapthagiri Educational Trust, is a non-profitable, and non-minority institution. Sri Sai Ram Institute of management and Computer Applications, 1997, Indian Medicine namely Siddha, Ayurvedha & Homeopathy-all under one roof.
9	Aarupadai Vedu (13)	to serve the society in general &needy	Vinayaka mission univ (DU) 27 years of estbt, Medical, Dental, Para-medical, Engg. Mgt Course,Thirumuruga Kirupananda Variyar Thavathiru Sundara Swamigal Medical, Educational and Charitable Trust 1981
10	Velammal Engineering College (12)		Velammal Educational Trust, 10 of them schools and another hr education institutions
11	Vel Tech Eng College (11)	group of ed instns	Vel.Sri.R.Rangarajan
12	Adhiparasakthi (7)	Religious, charity	1984 by Adhiparasakthi Charitable, Medical, Educational and Cultural Trust, in 1978; Secondary, Polytechnic, Engineering, Physiotherapy, Pharmacy, Nursing, Science and Agriculture
13	Adhiyamaan College of Eng (7)	backward dt-Dharampuri	One of the Institutions under Adhiyamaan Educational & Research Institution - Trust 1987-1988
14	Karpaga Vinayaga College (7)	political	Trust was initiated by the philanthropic spurts exerted by Thiru S. Regupathy, Honourable Minister for State for Home in association with a group of like -minded patrons
15	Sathyabama Institute of Science and Tech (7)	DU,Christian minority	Jeppiaar Educational trust founded in 1987, former leading politician
16	Annai Mathammal Sheela college of Eng (6)	Christian Minority	Needy on non-commercial basis Mathammal Sheela Trust Christian Educational Development Trust is a unit of Annai Mathammal Sheela Engineering College
17	Asan Memorial College (6)	Mahakavi Kumaran Asan, late poet	youngest of Asan Memorial group governed by Asan Memorial Association, in 1965
18	B.S Abdur Rahman Eng College (6)	Muslim minority	All India Islamic Foundation - members are from education, research, industry, business and administration.

19	P.R Engineering College' (6)	Ponniyah Ramajayam group of instns	Sri Ponnaiyah Ramajayathammal Education & Charitable Trust Ricst (Ram Institute of Computer Science & Technology) in 1985, 8 other instns.
20	Hindustan College of Eng (5)	Hindustan Group	Hindustan Group of Institutions , Deemed Univ
	K.C.G. College of Technology, Perungudi, Chennai	Hindustan Group	latest addition to the Hindustan Group of Institutions in 1998.
	Industrial		
21	Bannari Amman Institute of Technology	Industrial Bannari Amman Group	Expertise in sectors like sugar, distillery, textiles, garments, agro-products, finance, automobile, transport etc.
22	Dr.Mahalingam College of Engineering & Technology	industrial family	Mahalingam in Legislative Assembly of TN for 15 years. Chairman TN State Planning Commission.
23	S.K.R. Engineering College	Industries	Srinivasa Educational Trust.
24	S.S.N. College of Engineering	Shri S. S Nadar Educational & Charitable Trust' in 1994, industry	SSN Institutions of Padma Bhushan Dr. Shiv Nadar's give back to the society, HCL Group of Companies, not-for-profit basis
25	King's Engineering College,	Rajam Group of Companies	Minority Self-financing college, Queensland Amusement Park and Pleasant Days resort hotel. Run by a philanthropic charitable and religious trust Chartian Educational & Health Trust. Andhra Pradesh based companies
26	K.S.R. College of Engineering	Philanthropist	Aarthi Educational and Charitable Trust" in 1997, K.S.R. Exports, K S R Textile Mills Pvt Ltd. K S R Warping and Auto Sizing Mills; K S R Benefit Fund Ltd; Summer India Textile Mills Pvt Ltd.Sri Gokulam Hospital Pvt Ltd
	Others		
27	Anjalai Ammal Mahalingam Engineering College		Railway trade unionist,
28	Sakthi Mariamman Engineering College,		Kannammal Educational Trust,Founder Chairman,Sri K.N.Ramachandran, a Humanist, Self-made man, Educationist and a Philanthropist "Rashtriya Rattan Award"
29	Sri Venkateswara College of Engineering		Unit of Sri Venkateswara Educational and Health Trust (SVEHT) in 1984 Kanchi Kamakoti Peetadhipathi Sri Jayendra Saraswathi Swamigal.
30	A.V.C College of Engineering,	social vision, educational mission	AV Charity, Registered Society 1955 with AVC aided arts and science college, AVC Polytechnic in 1983, and AVC College of Engineering in 1996
31	Coimbatore Institute of Engineering and Information Technology	educationalists and agriculturalists	2001 by the Kovai Kalaimagal Educational Trust (KKET)Charitable, educational trust in 1992; KK arts and secicen college, KK I of mgt &tech,
32	Dhanalakshmi College of Engineering	TN Profnl Courses Entrance Exam (TNPCEE)	started in 2001 former prof of Anna Univ Dr.V.P. Ramamurthi, DCE sister institution of IIPE, associated with TNPCEE
33	Arunai Engineering College	Thiru vannamali	Saraswathi Ammal Educational Trust, 1993, Kamban College of Arts & Science For Women, Kumaran Polytechnic College
34	GKM College Of Engineering & Technology	GKM Group	in 1996, many Education Institutions and run by Suganthi Educational Trust.

Source: Based on information downloaded from college websites in June, 2008

Table A4
Nature and Size of Basic Infrastructure in the Sample Self-financing Engineering Colleges in Tamil Nadu

code	Name of College	Class room	Tutorial Halls	Lib/Lab	Drawing Hall
1	A.V.C College of Eng	31class rooms (each 83.67 Sqm)	10 tutorial halls size of each 83.67 Sqm	22 lab size of each 200 Sqm	2 Drawing halls size of 249.78 sqm
2	Adhiparasakthi	37		39	3
3	Anjalai Ammmal College of Eng	24 Class room Total size of area 2504.58aqm	10 Tutorial halls (826.02 sqm)	29 Lab (4549 sqm)	2 Drawing halls (349.2 sqm)
4	Asan Memorial College	15 class rooms - 98 sq.m each	17	4	2 Drawing Hall 190 sq.m each
5	Bannari Amman Institute of Tech	36		50, lib- MCA Lib (173 Sq.m)	
6	Bhajarang Eng College	20 class rooms (1506 sq.m)	16 Tutorial rooms (490 sq.m.)	16 Labs (2608.5 sq.m.)	2 Drawing halls (428 sq.m.)
7	Coimbatore Institute of Eng	14 in (Sq.M) 75.1 each	9 in (Sq.M) 75.1 each	16 in (Sq.M) 250 each	1 in (Sq.M) 175
8	Dhanalakshmi College of Eng	23 size of each 101 sq.m	15 size of each 36 sq.m	23 Lab size of each 250 sq.m	1 Drawing hall (250 sq.m)
9	Dr.Mahalingam College of Eng	26	17	9	2 Drawing halls (296.32 sq.m)
10	Easwari Eng College	41 Nos size of each 9.2 m X 9.2 m	7 size of each 9.2 m X 6 m	32 Nos size of each 23 m X 9.2 m	3 Drawing halls (each 16 m X 12.2 m)
11	Hindustan College of Eng	69 Class rooms each 113 sq.m	10 Tutorial Halls 70 sq. m each		8 Drawing Halls
12	Jaya Engineering College	37	17	2 lib; 40 labs	2
13	Jeppiaar Eng College	54 class room size of each 120sqm	8 rooms of 120sqm		2 Drawing halls size of 300sqm

14	K.S.R College of Eng	46 class room size of each 85 sq.m	10 Tutorial room size of each 85 sq.m	3 library size of each 600 sq.m	4 Drawing halls size of each 175 sq.m
15	Karpaga Vinayaga College	31Nos	15 nos		
16	S.K.R Engineering College	25 & 70 sq. m	14 & 40 Sq.m	32 Labs & 250 sq.m	4 nos – 350 sq.m
17	Sri Venkateswara College of Engineering	62 Nos. (65/71/89/97 sqm.) each	37 Nos. (34/64 sqm.) each	46 Nos. (136/166/245 sqm.) each	4 Nos. (158/210 sqm.) each
18	Velammal Engineering College	51 nos size of each 90.00 sq.m		6 Nos Library size of each 356.00 sq.m;31 Nos size of each 422.145 sq.m	2 Nos drawing halls size of each 315.90 sq.m

Source: Based on information downloaded from college websites in June, 2008

Table A5
Nature and Size of Additional Infrastructure in the Sample Self-financing Engineering Colleges in Tamil Nadu

Sl. No.	Name of College	Computer Centre	Seminar / Conference Hall	No of Computers	Workshop	Others
1	A.V.C College of Eng	1 size 293.8 Sqm	3 (each 249.78 Sqm)	466		play ground 7 Acres
2	Aarupadai Vedu	3		250		
3	Adhiparasakthi	4		434		play ground 5 Acres
4	Anjalai Ammmal College of Eng	4 computer center total size of 588 sqm	1 Exam Hall size fo 604.78	496		
5	Asan Memorial College	3		244		
6	Bannari amman Institute of Tech		6 AC Seminar Halls 250-seat			hostels with capacity for 1800 students
7	Bhajarang Eng College	3 Computer Center 892 sq.m.	Exam Section and confidential room . Exam cell - size 32 sq.m	405	2 Workshops are available with the total size is 608 sq.m.	Total area of the play ground 23.32 acres, Multi purpose Indoor Stadium facilities Area 923 sq.m Cost 40 Lakhs
8	Coimbatore Institute of Eng	1 in (Sq.M) 310	1 Exam Center size is 175.1 sq.m	260	1	
9	Dhaanish Ahmed College of Eng	5		240		
10	Dhanalakshmi College of Eng	2 computer center size of each 200sq.m		467		
11	Dr.Mahalingam College of Eng			1058	Indoor Stadium : 2500 Sq.mt.	land for sports - 12 Acres, Gym Facilities: (60ft X 60ft size hall), Multi purpose Sports Auditorium – 212.ft.X 120.ft.X.40.ft (25440 Sq.ft.).
12	Easwari Eng College	9		762		
13	Hindustan College of Eng	7 Computer Labs 1075.29 sq. m 2 Internet Lab 13.84 sq. m		802		

14	Jaya Engineering College	1		645	1 workshop	
15	Jeppiaar Eng College	1 room of 1200sqm		900		Total Area of the Play ground 17600 Sq. Ft.
16	K.S.R College of Eng	9 computer centres size of each 200 sq.m		752	11 workshop total size 13000 sq.m	
17	Karpaga Vinayaga College		Central Exam Facility, 31 rooms each 25 / 50 for	435		
18	King's Eng College	5	3 Central Exam Halls Total Area – 824.25 sq.m			
19	S.K.R Engineering College	3 computer center		550		
20	S.S.N College of Engineering			912		24 hour dispensary
21	Sri Venkateswara College of Engineering	3 Nos. 136 sqm. Each	Central Exam Facility, 8 rooms - capacity 1500	660	Workshop available	10 acres of Play field for playing various games.
22	Velammal Engineering College	8 computer center size of each 268.00 sq.m	1 Central Exam Facility total size 90 Sq.m	530		

Source: Based on information downloaded from college websites in June, 2008

Table A6
Courses Accredited and Period of their Validity in the Sample Self-financing Engineering Colleges in Tamil Nadu

Sl. No.	Colleges	Programmes	Level	Period of Validity	Status w.e.f.
1	Adhiparasakthi Engg. College, Melmaruvathur,	Civil, Mech.,EEE, ECE & Chem(†)	UG	3 Yrs	Sept. 10, 2004
2	Adhiyamaan College of Engg.	Chem, Civil(†), Mech (†), Prod. EEE (†), ECE (†), Instru. & Control (†), Comp Sci (†), IT	UG	3 Yrs	Sept. 12, 2007
3	Anjalai Ammal Mahalingam Engg. College,	Mech (†), ECE(†),Comp Sci (†),IT, EEE (†),Chem (†)	UG	3 Yrs.	4-May-07
4	Arulmigu Meenakshi Amman College of Engg.,	Chem, EEE, Civil, Mech	UG	3 Yrs.	27-Jul-06 11-Jun-04
5	Arunai Engg. College,Velu Nagar,	IT,Chem, EIE, Mech, EEE, Comp Sci, ECE, MCA	UG	3 Yrs.	27-Jul-06 12-May-99
6	B.S. Abdur Rahman Crescent Engg. College,	Instru. & Control Engg. (†), Comp Sci (†), IT, MCA(†), MBA(†), ECE (†), Mech (†) ElEE (†), Civil (†), Polymer Tech	UG	5 Yrs.	27-Jul-06 30-Mar-06 Aug. 6, 2002
7	Bannari Amman Institute of Technology,	Mech (†),Textile Tech (†)	UG	3 Yrs.	16-Mar-07
8	Coimbatore Institute of Technology,	Civil, ECE, Comp Sci, EEE Mech, Chem	UG	3 Yrs	Jan. 12, 2005
9	Dhanlakshmi Srinivasan Engineering College,	Comp Sci, ECE,	UG	3 Yrs	Sept. 12, 2007
10	Dr. M.G.R. Engg. College	Chem, ECE, Prod., Instru. & Control, Engg, Mech, EEE, Comp Sci, MBA, MCA, ME Applied, Electronics,	UG PG	3 Yrs. 5 Yrs.	24-Apr-02 Aug. 6, 2002
11	Dr. Mahalingam College E&T	Comp Sci, ECE, Mech, MCA,	UG, PG	3 Yrs.	4-May-07
12	Easwari Engg. College,	Comp Sci, (†), ECE (†), EEE (†), EIE (†), IT, MBA, MCA,	UG, PG	3 Yrs.	Jan. 22, 2008
13	G.K.M. College of Engg.& ech	Comp Sci, ECE, EEE,	UG	3 Yrs	Sept. 12, 2007
14	Hindustan College of Engg.,	Civil, Mech, ECE, Automobile, Comp Sci, Aeronautical, EEE, EIE, IT,	UG	3 Yrs	Feb. 15, 2005
15	Jaya Engg. College,	Textile Tech, Comp Sci, ECE,	UG	3 Yrs.	27-Jul-06
16	Jerusalem College of Engg.	Comp Sci, ECE, EEE,	UG	3 Yrs.	7-May-03
17	KCG College of Technology,	Comp Sci, EEE, Mech,	UG	3 Yrs.	27-Jul-06
18	K.S. Rangasamy College of Technology	Mech, EEE, ECE, Comp Sci, Mechat, IT, Textile, MBA, MCA,	UG PG	3 Yrs	Feb. 15, 2005 16-Mar-07
19	Madha Engg. College,	Mech, EEE,	UG	3 Yrs.	11-Jun-04

20	S.R.M. Engg. College	Mech, MCA, Structural, ECE, EEE, Instru & Control, Chem, MBA, Architecture, Civil (†), Comp Sci (†), Comp Sci,	UG, PG	5 Yrs. 3 Yrs.	Feb. 21, 1998, 1-Apr-01, 24-Apr-02
21	Sri Sivasubramaniya Nadar College of Engg.	Comp Sci, EEE, ECE MCA MBA	UG, PG	3 Yrs.	4-May-07
22	Sathyabhama Engg. College,	Mech, Prod., ECE, Instrumentation & Control Engg, Comp Sci, EEE,	UG	5 Yrs.	12-May-99
23	Sri Muthukumaran Institute of Technology,	Comp Sci, Mech, EEE, ECE,	UG	3 Yrs.	11-Jun-04
24	Sri Sai Ram Engg. College,	EEE, Comp Sci, ECE, Instru& Control Engg, IT, Mech,	UG	3 Yrs.	16-Mar-07
25	Sri Venkateswara College of Engg.,	Comp Sci,(†), EEE, MCA, IT (†)Mech,(†), ECE (†), Thermal, Marine, Automobile, Chem ,(†),	UG,PG	5 Yrs., 3 Yrs.	24-Apr-02 Sept. 12, 2003 27-Jul-06
26	St. Peter's Engg. College,	EEE(†), Chem, Comp Sci(†), Mech(†), ECE(†), EIE(†), Prod, (†), MBA, (†), IT, Civil, Bio-Tech,	UG, PG	3 Yrs. .	27-Jul-06, Sept. 12, 2007, 11-Jun-04 Jan. 22, 2008
27	Vel Tech Engg. College	Comp Sci, ECE., EEE, IT, MCA,MBA, Mech, EIE	UG, PG	3 Yrs. 5 Yrs.	27-Jul-06, 16-Mar-07
28	Velammal Engg. College,	IT, ECE (†), EEE. (†) EIE & Instru., .Mech, Comp Sci (†)	UG	3 Yrs, 5 Yrs.	4-May-07

Note: Programmes Accredited by NBA as on Jan 2008
Source: Based on www.nba.org, downloaded as on 15.6.2008

Table A7
List of Sample Self-financing Colleges by Location in Tamil Nadu

1	A.V.C College of Eng
2	Aarupadai Vedu
3	Adhiparasakthi
4	Adhiyamaan College of Eng
5	Anjalai Ammmal College of Eng
6	Annai Mathammal Sheela college of Eng
7	Arulmigu Meenakshi amman college of Eng
8	Arunai Eng of College
9	Asan Memorial College
10	B.S Abdur Rahman Eng College
11	Bannari amman Institute of Tech
12	Bhajarang Eng College
13	Coimbatore Institute of Eng
14	Dhaanish Ahmed College of Eng
15	Dhanalakshmi College of Eng
16	Dr. M.G.R Group of College
17	Dr.Mahalingam College of Eng
18	Easwari Eng College
19	GKM college of Eng
20	Hindustan College of Eng
21	Jaya Engineering College
22	Jeppiaar Eng College
23	Jerusalem College of Eng
24	K.C.G College of Tech
25	K.S.R College of Eng
26	Karpaga Vinayaga College
27	King's Eng College
28	Madha Engineering College
29	Magna College of Eng
30	Measi Academy of Architecture
31	P.R Engineering College'
32	S.K.R Engineering College
33	S.R.M Institute of Science & Tech
34	S.S.N College of Engineering
35	Sakthi Mariamman Engineering
36	Sathyabama Institute of Science and Tech
37	Sri Muthukumaran Institute of Tech
38	Sri Sairam Engineering College
39	Sri Venkateswara College of Engineering, Sriperumbudur
40	St. Peter's Engineering College, Avadi, Chennai
41	Vel Tech Engineering College, Chennai
42	Velammal Engineering College, Chennai

Source: Based on information downloaded from Tamilnow.com in May, 2008

NATIONAL UNIVERSITY OF EDUCATIONAL PLANNING AND ADMINISTRATION

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