

Affordability Challenges In Higher Education: A Study On The Increasing Cost Of Education In Autonomous And Deemed Institutions In Chennai**R. Sundaresan**

Research Scholar, Department of Commerce, Vels Institute of Science, Technology and Advanced Studies (VISTAS), Pallavaram, Chennai, Tamil Nadu, India-600117.

Email: rsnitech@gmail.com**Dr. M. Vetrivel**

Associate Professor and Head (I/C), Department of Commerce, Vels Institute of Science, Technology and Advanced Studies (VISTAS), Pallavaram, Chennai, Tamil Nadu, India-600117.

Email: vetrivel.sms@velsuniv.ac.in**ABSTRACT**

The rising cost of higher education has emerged as a critical concern in India, particularly in metropolitan cities such as Chennai where autonomous colleges and deemed universities dominate the academic landscape. While these institutions are recognized for their academic flexibility, infrastructure, and quality enhancement, they have also contributed significantly to the escalation of educational expenses. The present study examines the affordability challenges faced by students in autonomous and deemed institutions, with a focus on identifying the factors driving fee escalation and evaluating its impact on access to education. A quantitative research design was adopted using primary data collected from 250 students across various institutions in Chennai through a structured questionnaire measured on a five-point Likert scale. Statistical tools such as correlation and multiple regression analysis were employed to assess the relationship between cost factors and affordability levels. The findings indicate that increasing tuition fees, additional institutional charges, and lack of effective fee regulation significantly reduce affordability. The regression model demonstrates strong explanatory power ($R^2 = 0.64$), suggesting that cost-related variables substantially influence students' financial accessibility. The study further reveals that affordability challenges are more pronounced among middle- and lower-income groups, leading to increased dependence on education loans and financial stress. The research highlights that affordability is not solely determined by income levels but is also influenced by institutional practices and policy frameworks. The findings underscore the need for regulatory intervention, financial support mechanisms, and transparency in fee structures.

Keywords: Affordability, Higher Education, Autonomous Institutions, Deemed Universities, Education Cost, Financial Accessibility, Chennai.**1. INTRODUCTION**

Higher education has traditionally been regarded as a fundamental driver of socio-economic mobility and national development. In India, the expansion of higher education has been shaped by increasing demand, demographic growth, and policy reforms aimed at improving access and quality. Over the past few decades, the higher education landscape has undergone a significant transformation, marked by the emergence and rapid expansion of autonomous colleges and deemed universities. These institutions have played a crucial role in enhancing academic standards, introducing innovative curricula, and aligning education with global practices. Chennai, one of India's leading educational hubs, hosts a large number of such institutions, attracting students from across the country. The city's higher education ecosystem is characterized by a mix of government, private, autonomous, and deemed institutions offering a wide range of academic programmes. While this diversification has improved educational opportunities, it has also led to a shift in the financing structure of higher education.

Unlike government institutions, which receive substantial public funding and offer subsidized education, autonomous and deemed institutions rely heavily on student fees as their primary source of revenue. This shift has resulted in a steady increase in tuition fees and associated costs, raising concerns about affordability and accessibility.

2. OBJECTIVES OF THE STUDY

1. To examine the impact of tuition fees on the affordability of higher education among students studying in autonomous and deemed institutions in Chennai.
2. To analyze the influence of additional institutional costs, including hostel fees, transportation charges, laboratory expenses, and miscellaneous fees, on students' affordability.
3. To evaluate the relationship between the total cost of education and students' perceived affordability.
4. To study the moderating role of financial support mechanisms such as scholarships, educational loans, and family financial support in enhancing affordability.
5. To examine whether students' perceptions of affordability differ based on their socio-economic background.
6. To provide suitable policy recommendations for improving affordability and accessibility in higher education.

3. NEED AND SIGNIFICANCE OF THE STUDY

Higher education plays a crucial role in promoting socio-economic development, improving employment opportunities, and enhancing the quality of human capital. However, the rising cost of higher education has become a major concern in India, particularly in metropolitan cities such as Chennai, where autonomous colleges and deemed universities constitute a significant segment of the higher education system.

The study is significant as it examines the affordability challenges faced by students pursuing higher education in autonomous and deemed institutions. The findings will assist policymakers, educational administrators, and regulatory authorities in developing measures to improve educational accessibility and affordability.

4. SCOPE OF THE STUDY

The study focuses on affordability issues in higher education among students enrolled in autonomous colleges and deemed universities located in Chennai City. It primarily examines the relationship between educational costs and affordability by considering tuition fees, additional institutional charges, and available financial support mechanisms.

The study covers undergraduate and postgraduate students from various academic disciplines. The geographical scope is restricted to Chennai City, while the institutional scope is limited to autonomous colleges and deemed universities.

5. REVIEW OF LITERATURE

The issue of affordability in higher education has been widely examined in both global and Indian contexts. Existing literature highlights the growing concern over rising education costs and their impact on student access and equity.

Johnstone (2004) emphasized that cost-sharing mechanisms in higher education often shift the financial burden from the state to students, thereby affecting affordability. Tilak (2015) observed that privatization of higher education in India has led to increased commercialization, resulting in higher fees and reduced accessibility.

Altbach et al. (2009) highlighted that the expansion of private higher education institutions globally has been accompanied by rising costs, making affordability a key policy concern. Agarwal (2006) pointed out that deemed universities often operate with minimal fee regulation, allowing them to set high tuition fees.

5.1 RESEARCH GAP

Although previous studies have extensively examined the rising cost of higher education and its implications, there is limited research focusing on the affordability challenges faced by students in autonomous and deemed institutions, particularly in Chennai.

Most existing studies emphasize the direct relationship between education cost and access, without considering broader institutional and structural factors influencing affordability. Therefore, this study addresses the gap by providing empirical evidence from Chennai.

6. STATEMENT OF THE RESEARCH PROBLEM

The increasing cost of higher education has become a major concern for students and policymakers alike. Autonomous and deemed institutions, while contributing to academic excellence, have introduced high fee structures that pose significant challenges to affordability.

Students are required to bear not only tuition fees but also various additional expenses, which collectively increase the financial burden. Therefore, the present study seeks to analyze the increasing cost of education and its impact on affordability among students in Chennai.

7. THEORETICAL FRAMEWORK

The study is based on the Human Capital Theory proposed by Gary Becker (1993), which views education as an investment that enhances an individual's knowledge, skills, productivity, and future earning potential.

According to this theory, students and their families invest in higher education with the expectation of obtaining better employment opportunities and higher future income. However, increasing educational costs may affect participation in higher education, particularly among economically disadvantaged groups.

The theory further suggests that financial support mechanisms such as scholarships, educational loans, and family financial assistance play a vital role in facilitating educational access.

8. CONCEPTUAL FRAMEWORK

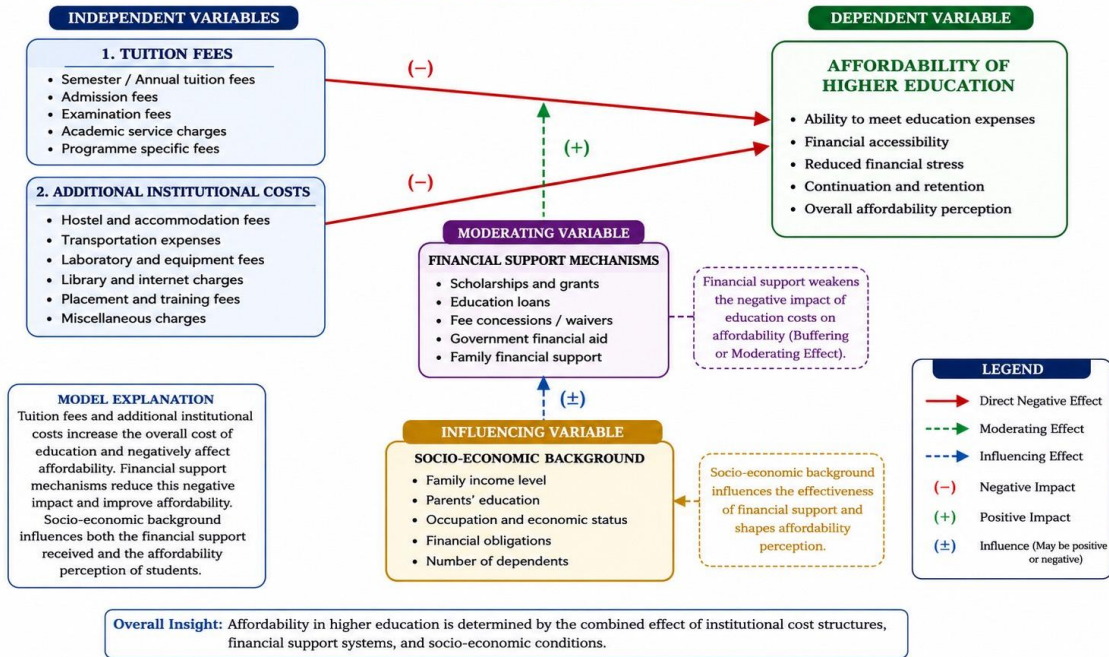
The conceptual framework of the study identifies tuition fees and additional institutional costs as the primary independent variables influencing affordability of higher education, which is treated as the dependent variable.

Financial support mechanisms such as scholarships, education loans, and family financial support act as moderating variables that help reduce the financial burden. Socio-economic background serves as an influencing variable affecting both affordability perception and the effectiveness of financial support.

The framework proposes that rising educational costs negatively affect affordability, while financial support mechanisms partially reduce this adverse effect.

CONCEPTUAL MODEL

Affordability Challenges in Higher Education: A Study on the Increasing Cost of Education in Autonomous and Deemed Institutions in Chennai



9. EXPLANATION OF THE CONCEPTUAL MODEL DIAGRAM

The conceptual model illustrates the structural relationship between education cost components and affordability among students studying in autonomous and deemed institutions in Chennai.

The model consists of four major components:

- Independent Variables – Tuition Fees and Additional Institutional Costs
- Dependent Variable – Affordability of Higher Education
- Moderating Variable – Financial Support Mechanisms
- Influencing Variable – Socio-Economic Background

The model demonstrates that increasing educational costs negatively affect affordability, while financial support mechanisms partially moderate this relationship.

10. RESEARCH METHODOLOGY

The study adopts a descriptive and analytical research design to examine affordability challenges in higher education.

A quantitative approach was used to collect and analyze data from students studying in autonomous and deemed institutions in Chennai. A sample of 250 respondents was selected using convenience sampling. Primary data were collected through a structured questionnaire based on a five-point Likert scale. Statistical tools such as Mean Analysis, Correlation Analysis, and Multiple Regression Analysis were employed to analyze the data and test the hypotheses.

11. HYPOTHESES OF THE STUDY

- H₁:** Tuition fees have a significant negative impact on affordability among students in autonomous and deemed institutions.
- H₂:** Additional institutional costs (including hostel, transport, and miscellaneous charges) significantly reduce affordability.
- H₃:** There is a significant negative relationship between total education cost and students' perceived affordability.
- H₄:** Financial support mechanisms (scholarships, loans, family income support) significantly moderate the relationship between education cost and affordability.
- H₅:** There is a significant difference in affordability perception based on students' socio-economic background.

12. DATA ANALYSIS AND RESULTS

12.1 MEAN ANALYSIS

Table 12.1 Mean Analysis of Key Variables

Variables	Mean	Standard Deviation
Tuition Fees	4.02	0.71
Additional Institutional Costs	3.88	0.76
Financial Support	3.21	0.82
Affordability	2.91	0.68

Source: Primary Data

Interpretation

The mean analysis reveals that tuition fees have the highest mean value (4.02), indicating that students strongly perceive tuition fees as excessively high. Additional institutional costs also show a high mean value (3.88), confirming that non-tuition expenses significantly contribute to the financial burden.

In contrast, affordability records a relatively low mean value (2.91), suggesting that students perceive higher education as less affordable. Financial support shows a moderate mean value (3.21), indicating partial availability but insufficient effectiveness in addressing cost pressures.

The disparity between high cost perception and low affordability clearly highlights the severity of affordability challenges among students in autonomous and deemed institutions.

12.2 INDEPENDENT SAMPLE T-TEST (INCOME LEVEL)

Table 12.2 Independent Sample T-Test Based on Income Level

Income Group	Mean	Standard Deviation	t-value	p-value
Low Income Students	2.45	0.69	4.87	0.000
High Income Students	3.32	0.74		

Source: Primary Data

Interpretation

The Independent Sample t-test was conducted to examine whether affordability differs based on students' income levels. The results indicate that students from high-income groups (**Mean = 3.32**) perceive higher education as more affordable compared to students from low-income groups (**Mean = 2.45**).

The calculated **t-value (4.87)** and **p-value (0.000)** indicate that the difference is statistically significant at the 1 percent level. Therefore, the null hypothesis is rejected.

This finding confirms that socio-economic background plays a critical role in determining affordability, with economically weaker students facing greater financial constraints.

12.3 CORRELATION ANALYSIS

Table 12.3 Correlation Matrix

Variables	Tuition Fees	Additional Costs	Financial Support	Affordability
Tuition Fees	1.000	0.61	-0.28	-0.68
Additional Costs	0.61	1.000	-0.22	-0.64
Financial Support	-0.28	-0.22	1.000	0.53
Affordability	-0.68	-0.64	0.53	1.000

Source: Primary Data

Interpretation

The correlation analysis reveals a strong negative relationship between tuition fees and affordability (**r = -0.68**), indicating that higher tuition fees significantly reduce students' ability to afford higher education.

Similarly, additional institutional costs exhibit a strong negative correlation with affordability (**r = -0.64**), suggesting that increasing indirect educational expenses further decrease affordability.

Financial support demonstrates a moderate positive relationship with affordability (**r = 0.53**), indicating that scholarships, educational loans, and family support improve affordability to a certain extent.

These results confirm that cost-related factors are major determinants of affordability, while financial support acts as a partial mitigating factor.

12.4 MULTIPLE REGRESSION ANALYSIS

Table 12.4 Multiple Regression Analysis

Variables	Beta Coefficient (β)	t-value	Significance (p-value)
Tuition Fees	-0.49	-8.74	0.000
Additional Institutional Costs	-0.37	-6.42	0.000
Financial Support	0.31	5.86	0.000

Model Summary

R	R ²	Adjusted R ²	F-value	Significance
0.800	0.640	0.635	145.27	0.000

Source: Primary Data

Interpretation

The Multiple Regression Analysis indicates that the model explains **64 percent (R² = 0.64)** of the variation in affordability, demonstrating strong explanatory power.

Tuition fees have the strongest negative impact on affordability (**β = -0.49**), followed by additional institutional costs (**β = -0.37**), and both variables are statistically significant.

Financial support shows a positive and significant effect (**β = 0.31**), indicating that financial assistance mechanisms help improve affordability.

Thus, the results confirm that cost-related variables are the dominant predictors of affordability among students.

12.5 MODERATION ANALYSIS

Table 12.5 Moderation Analysis

Variables	Beta Coefficient (β)	t-value	p-value
Education Cost	-0.52	-8.91	0.000
Financial Support	0.29	5.22	0.000
Education Cost × Financial Support	0.18	3.47	0.001

Source: Primary Data

Interpretation

The moderation analysis was conducted to examine whether financial support mechanisms moderate the relationship between educational costs and affordability. The interaction term between education cost and financial support is statistically significant (**β = 0.18**), confirming the presence of a moderating effect.

However, the effect is partial in nature. While financial support reduces the negative influence of rising educational costs on affordability, it does not eliminate the impact entirely.

12.6 HYPOTHESIS TESTING SUMMARY

Table 12.6 Hypothesis Testing Summary

Hypothesis	Statement	Result
H ₁	Tuition fees have a significant negative impact on affordability.	Supported
H ₂	Additional institutional costs significantly reduce affordability.	Supported
H ₃	There is a significant negative relationship between education cost and affordability.	Supported
H ₄	Financial support significantly moderates the relationship between education cost and affordability.	Supported
H ₅	Affordability differs significantly based on socio-economic background.	Supported

Source: Primary Data

Interpretation

The hypothesis testing results indicate that all proposed hypotheses are statistically significant and supported by empirical evidence.

Tuition fees and additional institutional costs were found to have a significant negative impact on affordability, confirming that rising educational expenses act as a major barrier to higher education access.

Financial support mechanisms play a significant moderating role by reducing the adverse effects of high educational costs. Furthermore, affordability perceptions differ significantly across income groups, emphasizing the importance of socio-economic background in determining educational accessibility.

Overall, the findings validate the conceptual framework and demonstrate that affordability challenges are influenced by educational costs, financial support mechanisms, and socio-economic conditions.

13. FINDINGS OF THE STUDY

The study provides several important insights into the affordability challenges faced by students in autonomous and deemed institutions in Chennai.

1. Tuition fees constitute the most significant component of educational cost, with students perceiving them as excessively high. This indicates that fee structures in such institutions have become a major financial burden.
2. Additional institutional costs, including hostel fees, transportation expenses, laboratory charges, and miscellaneous fees, substantially contribute to the overall financial pressure faced by students.
3. The affordability level among students is relatively low, suggesting that the increasing cost of education is not aligned with the financial capacity of many families.
4. A significant difference in affordability exists based on income level, with students from low-income backgrounds experiencing greater financial constraints compared to those from high-income families.
5. Correlation analysis confirms a strong negative relationship between education cost and affordability, indicating that affordability decreases significantly as educational expenses increase.
6. Regression analysis reveals that tuition fees have the strongest negative impact on affordability, followed by additional institutional costs, establishing them as the primary determinants of affordability.
7. Financial support mechanisms such as scholarships, educational loans, and family support positively influence affordability and help students manage educational expenses.
8. Moderation analysis confirms that financial support partially moderates the relationship between education cost and affordability, reducing financial burden but not completely eliminating affordability challenges.

14. CONCLUSION AND RECOMMENDATIONS

14.1 CONCLUSION

The present study provides a comprehensive analysis of affordability challenges in higher education among students studying in autonomous and deemed institutions in Chennai. The findings indicate that rising tuition fees and additional institutional expenses significantly reduce affordability and create barriers to educational access, particularly for economically disadvantaged students.

Although financial support mechanisms such as scholarships and educational loans improve affordability, their impact remains limited and insufficient to fully offset increasing educational costs. This highlights the need to consider affordability as a broader structural issue influenced by institutional policies, economic conditions, and financial support systems.

The study emphasizes the importance of effective fee regulation, expansion of financial assistance programmes, and increased public investment in higher education. Addressing affordability challenges is essential to ensure equal educational opportunities, social equity, and long-term socio-economic development.

14.2 RECOMMENDATIONS

1. Regulatory authorities should monitor and regulate fee structures in autonomous and deemed institutions to prevent excessive fee escalation.
2. Institutions should clearly disclose all educational costs, including tuition fees and additional charges, to help students and parents make informed decisions.
3. Government agencies and educational institutions should increase scholarship opportunities, particularly for economically weaker students.
4. Financial institutions should provide student-friendly education loans with lower interest rates and flexible repayment options.
5. Institutions should encourage online and hybrid learning approaches to reduce operational costs and educational expenses.
6. Awareness programmes should be conducted to educate students regarding available scholarships, grants, and loan facilities.
7. Increased government funding can reduce institutional dependence on student fees and improve affordability.
8. Corporate organizations should actively contribute through scholarships, sponsorships, fee reimbursement schemes, and educational grants.
9. Donor-funded institutions and charitable organizations should receive greater support through CSR initiatives and philanthropic contributions.
10. Educational institutions should ensure academic excellence while maintaining reasonable and affordable fee structures.

15. RELIABILITY AND VALIDITY OF THE INSTRUMENT

To ensure the reliability and validity of the research instrument, a structured questionnaire was developed based on an extensive review of literature and expert recommendations. A pilot study was conducted among 30 students to assess the clarity, relevance, and consistency of the questionnaire items.

Reliability was assessed using Cronbach's Alpha coefficient. The overall Cronbach's Alpha value exceeded 0.70, indicating satisfactory internal consistency and reliability of the measurement scale.

Content validity was established through consultation with academic experts and research scholars specializing in higher education and educational finance. Their suggestions and feedback were incorporated to improve the relevance, accuracy, and comprehensiveness of the questionnaire.

16. SAMPLING JUSTIFICATION

The study adopted a convenience sampling technique to select respondents from autonomous colleges and deemed universities in Chennai.

This method was chosen due to accessibility, availability of respondents, time limitations, and financial constraints. Despite its limitations, the sample included students from diverse socio-economic backgrounds and academic disciplines, thereby providing meaningful insights into affordability challenges in higher education.

17. ETHICAL CONSIDERATIONS

The study adhered to established ethical standards throughout the research process.

Participation in the survey was entirely voluntary, and respondents were informed about the objectives and academic purpose of the study before data collection.

The confidentiality and anonymity of participants were strictly maintained. No personal information such as names, contact details, or identification numbers was collected. The information obtained was used solely for academic and research purposes.

Furthermore, respondents participated without any pressure, coercion, or undue influence.

18. LIMITATIONS OF THE STUDY

1. The study is geographically limited to Chennai City; therefore, the findings may not be generalizable to other regions.
2. The study focuses exclusively on autonomous colleges and deemed universities and excludes government and aided institutions.
3. The use of convenience sampling may affect the representativeness and generalizability of the findings.
4. The study relies on students' perceptions and self-reported responses, which may be subject to response bias.
5. Due to time and resource constraints, the sample size was restricted to 250 respondents.
6. The study primarily examines financial dimensions of affordability and does not extensively explore psychological, social, or cultural factors.

19. IMPLICATIONS OF THE STUDY

19.1 POLICY IMPLICATIONS

The findings of the study highlight the urgent need for policymakers and regulatory authorities to address the growing affordability challenges in higher education. The significant negative impact of tuition fees and additional institutional costs on affordability indicates the necessity for effective fee regulation mechanisms in autonomous and deemed institutions. Government agencies should establish transparent guidelines for fee determination and monitor periodic fee revisions to prevent excessive increases that may restrict educational access.

Furthermore, policymakers should strengthen scholarship schemes, educational grants, and financial assistance programmes targeting economically weaker students. Expanding public investment in higher education can reduce institutions' dependence on student fees and contribute to making higher education more accessible and equitable.

19.2 INSTITUTIONAL IMPLICATIONS

The study provides important implications for educational institutions, particularly autonomous colleges and deemed universities. Institutions should adopt transparent and accountable fee structures by clearly communicating all tuition and non-tuition charges to students and parents.

The findings also suggest that institutions should strengthen internal financial support systems, including merit-based scholarships, need-based fee concessions, installment payment facilities, and student welfare funds. Educational institutions must continuously evaluate their cost structures and identify opportunities to reduce unnecessary expenses without compromising educational quality.

19.3 SOCIAL IMPLICATIONS

The study reveals that increasing educational costs have broader social consequences beyond individual financial burden. Rising educational expenses may create barriers for students from economically disadvantaged backgrounds, thereby limiting equal access to higher education opportunities.

Improving affordability is therefore essential for promoting social justice, educational inclusion, and equal opportunities for all sections of society. Affordable higher education enables students from diverse socio-economic backgrounds to acquire knowledge, skills, and qualifications necessary for personal and professional advancement.

19.4 ECONOMIC IMPLICATIONS

The findings of the study have significant economic implications. Higher education is widely recognized as an investment in human capital that contributes to economic growth and national development. When educational costs become unaffordable, students may delay or discontinue higher education, resulting in underutilization of human resources and reduced workforce productivity.

By improving affordability through financial support mechanisms and effective cost management, governments and institutions can encourage greater participation in higher education, leading to a more skilled workforce, increased employability, and stronger economic growth.

19.5 RESEARCH IMPLICATIONS

The study contributes to the existing body of knowledge on higher education affordability by providing empirical evidence from autonomous and deemed institutions in Chennai.

The findings demonstrate the importance of examining affordability as a multidimensional concept influenced by educational costs, financial support mechanisms, and socio-economic conditions. The study also provides a foundation for future researchers to explore affordability challenges in different geographical regions and institutional settings.

20. FUTURE RESEARCH DIRECTIONS

1. Future studies may compare affordability challenges between public and private higher education institutions.
2. Similar research may be extended to other metropolitan cities and states across India to obtain broader perspectives on higher education affordability.
3. Longitudinal studies may be conducted to examine changes in educational affordability over time.
4. Future studies may include parents, policymakers, and institutional administrators as respondents to gain multiple stakeholder perspectives.
5. Advanced statistical techniques such as Structural Equation Modeling (SEM) may be employed to investigate complex relationships among affordability-related variables.
6. Researchers may examine the psychological and emotional effects of financial stress among higher education students.

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