

TRENDS, DIFFICULTIES, AND POSSIBILITIES IN STRATEGIC MANAGEMENT ACCOUNTING PRACTICES IN INDIAN UNIVERSITIES

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Abstract: The study explores developments, challenges and opportunities involved in the adoption of Strategic Management Accounting (SMA) in Indian higher education institutions. By taking an interest in utilizing advanced accounting techniques for strategic purposes, SMA is in a position to cause a significant impact in the Indian universities by improving their financial operations, resource distribution and overall operation effectiveness. Through the use of SMA, the long term planning, cost control and performance review become enhanced thereby building the effectiveness of institutions. Other than these, the study reveals a move into the integration of technological solutions such as AI, Enterprise Resource Planning (ERP) and the use of data analytics to conduct informed decision making. Besides, universities are focusing on sustainability, risk assessment, and performance budgeting system to improve on financial planning strategies. However, institutional adoption of SMA remains temperamental due to a variety of hardships. Resistance to innovate from within the firm, finance constraints, complex regulatory rules, and lack of competent personnel can be good barriers to the implementation of SMA. Furthermore, inadequate technological tools and a lack of consciousness on the part of administrators are additional barriers. The analysis suggests that the great support SMA growth in Indian higher education institutions will receive through policy reforms, strategic technological upgrades and increased training of University staff. The review presents concrete steps that are possible, such as collaboration with government and industry experts, to make financial sustainability and accountability better in universities....

Keywords: Strategic Management Accounting (SMA), Indian Universities, Private, Public, Management Accounting Practices, Innovation Adoption, Interdepartmental Interaction

1. INTRODUCTION

Strategic Management Accounting is the way in which financial and non financial data are organized to be able to feed their way into strategic decision making strategies in organizations. The need for Indian universities to address the challenges of financial sustainability and proliferation of resources in these centres is so critical with the application of Strategic Management Accounting [1]. In India, the process of educational reform being wrought by an alliance of forces such as globalization, privatization and relentless pursuit of quality education. Universities-which are essentially custodians of academic excellence-cannot shirk away from balancing social responsibility with financial sustainability. Strategic Management Accounting provides tools and frameworks to the universities to navigate these complex dynamics. By adopting SMA, universities can better align their operations with long-term goals, ensure an effective use of resources, and stand that much more competitive in jostling for a global education market. The



adoption of SMA in Indian universities has however remained relatively limited and uneven. whereas some adopted advanced tools like Balanced Scorecards, Activity-Based Costing, and Benchmarking while others have a retrograde or outdated financial practice that does not support strategic planning. The variation arises due to differences in funding mechanisms, regulatory frameworks, technological readiness, and trained professional availability. Public universities have bureaucratic constraints and limited financial autonomy whereas private universities face the problem of resource limitations and compulsion to yield profits.

The a major limitation is a lack of consciousness and opposition by stakeholders towards the SMA implementation. Still, administrators and faculty are not impressed by the benefits accrue through the introduction of strategic accounting tools within the organization, thereby considering them a burden rather than a facilitator in efficiency [2]. Other limitations include inadequate technological infrastructure and resource constraints, which could potentially limit SMA practice implementations in smaller institutions or those located in rural areas.

1.1 Overview of Strategic Management Accounting (SMA)

SMA is an advanced approach to accounting that integrates financial and nonfinancial information for enabling strategic decisions in an organization [3]. As opposed to the traditional management accounting, which is mainly concerned with the internal processes and cost management in an organization, SMA aspires to align accounting practice with a long-term focus on strategic goals of an organization. SMA uses methods like balanced scorecards, value chain analysis, activity-based and costing and benchmarking to present a wide overview of performance. By correlating financial information, market indicators, strategic activities, and performance indicators, SMA promotes an organization's long-term growth ideology by evaluating its strategy. For universities, SMA is necessary for decision-making on allocation of resources; for ensuring performance-based funding; and, for promoting long-term planning initiatives.

1.2 Importance of SMA in higher education

A crucial aspect of the higher learning context is Strategic Management Accounting (SMA) since it offers institutions with a needed impetus to relate their financial management to strategic goals. Higher education institutions are currently engaged in a changing environment that is defined by changing resources, increasing competition and endless requirements from students, professors and regulatory agencies [4]. Using financial and non-financial data, SMA assists universities in modernizing their approach to the point of emanation from traditional cost accounting while giving flexibility to strategic decisions. Performance measurement, activity-base costing and value chain analysis encapsulate comprehensive tools that can help an institution to allocate resources effectively, improve operational performance and foster accountability. Since Indian public and private universities face a vast number of challenges, such as funding constraints and the burden to provide quality education that conforms to the global standards, SMA is indispensable.

1.3 Research Methodology

The proposed research is based on a qualitative narrative review approach to address trends, issues and the opportunities of Strategic Management Accounting (SMA) practices in Indian universities. Peer-reviewed journals, academic books, doctoral dissertations, and policy reports were searched using Google scholar, Scopus-dedicated journals, and institutional repositories, which resulted in the collection of relevant literature.

The search criteria were based on the studies concerning strategic management accounting, financial management of higher education, technology adoption (AI, ERP), sustainability accounting, and university governance involving public and privates. Indian as well as international studies were incorporated so as to allow comparison in insights. The literature gathered was systematically reviewed and summarised in three broad areas namely, emerging trends, challenges in implementation and future opportunities.

The conceptual framework presents how Strategic Management Accounting (SMA) may be adopted within the Indian universities. It shows that the need to implement SMA is created by major factors like the technological development, responsibility requirements, and sustainability focus. Nevertheless, this adoption is limited by institutional factors such as financial constraints, complexity of regulations and human resource issues. The framework also emphasizes the driving forces, i.e., specific training opportunities, favorable policy frameworks, and digital tools, e.g. ERP and AI, which enable overcoming these barriers. When there is good fit between drivers and enablers, financial efficiency, better strategic decision making, and long term institutional sustainability in higher education are achieved.



Figure 1: Conceptual Framework of Strategic Management Accounting Adoption in Indian Universities

2. EMERGING TRENDS IN STRATEGIC MANAGEMENT ACCOUNTING PRACTICES

Emerging trends in Strategic Management Accounting (SMA) are changing the view that organizations take on financial and strategic matters. These advancements are focused around the digitalization of tools such as AI, machine learning and big data analytics, giving organizations an ability to process live data, predict future trends and make strategic decisions on the basis of accurate information. One significant trend is that greater emphasis is being given to ecological concerns, as SMA is currently focusing on adopting green accounting measures, maximizing resources, synchronizing financial goals with CSR activities. Strategic management accounting is currently broadening beyond traditional industries into healthcare, education, and nonprofit organizations in order to enable the integration of operational effectiveness with strategic goals. In view of the greater complexity of global challenges, the SMA changes its approaches to risk management, supply chain optimization, and global market analysis for organizations to maintain competitiveness and react to rapid changes.

The literature in this section is thematically reviewed in order to observe Strategic Management Accounting practices within the field of higher learning and other related areas. In particular, the previous research is structured around major themes such as adoption of technology, performance-based budgetary reforms, sustainability and green accounting, and outcome-based funding models. This thematic framework allows establishing both convergent and divergent points of view on the international and Indian levels, as well as offer a consistent basis in understanding trends and issues, along with future prospects of SMA implementation in Indian higher education institutions.

2.1 Technology Integration (AI and ERP Systems)

Another major trend in Strategic Management Accounting (SMA) practices in higher education institutions is the use of advanced technologies, namely Artificial Intelligence (AI) and Enterprise Resource Planning (ERP) systems [5]. These technologies help universities move away more conservative and retrospective accounting systems and onward to more strategic and data-oriented financial management systems.

AI improves SMA through complex data analysis, predictive forecasting, and automatic financial operations. By enabling informed strategic decision making, enhancing cost management, and helping universities predict financial and operations challenges in the future, AI enables the use of massive datasets in real-time.

ERP systems are what roll alongside AI since they help to merge the financial, academic, and administrative data across the university departments into one digital platform. This integration enhances the levels of data consistency, minimizes manual errors, and promotes coordinating planning and budgeting. Combining AI and ERP systems enhances SMA with timely, accurate information that allows financial management to be in line with strategic goals of the institution.

Figure 2 demonstrates the role of technological integration, as a supporting enabler of Strategic Management Accounting, in improving the accuracy of data, coordinating the various departments, and facilitating the timely making of strategic decisions in universities.



Figure 2: Technology Integration [6]

Image Source: <https://www.fastdirectsis.com/helping-teachers-with-technology-integration/>

2.2 Performance-Based Budgeting

Performance-based budgeting is a more recent approach that links financial planning to measurable results rather than the traditional input-based budgeting that involved distribution based on historical habits or arbitrary figures [7]. This particular method in SMA within higher education calls for aligning the financial resources with the institutional priorities so that funds are allocated towards areas that will have the greatest impact. For instance, universities may include graduation rates, student retention, research output and teaching quality as performance indicators that should be used when distributing funds [8].

Adoption of such a method instills department and staff accountability in delivering tangible results adding to the performance-oriented outcomes of their programs. In this manner, universities are motivated to optimize operational efficiency and academic quality in light of funding being tied to performance [9]. Performance-based budgeting also ensures that the financial strategy of the institution is aligned with its long-term goals, thus ensuring that resources are spent on initiatives that make the university more effective in academic excellence, innovation, and supporting students. Such an approach does not only improve the transparency and accountability that characterizes budgeting but also helps universities overcome limited funds by judiciously spending their finances.

2.3 Data-Driven Decision-Making and Analytics

An emergent feature of SMA practice in the modern period is reliance on data-driven decision-making and analytics. For example, using universities' access to analytics tools, universities are able to process enormous amounts of financial, academic, and operationally-based information to identify trends and patterns useful in strategic decisions [10]. For example, financial data analyses can assist universities in identifying cost areas to reduce or otherwise optimize investments. Academic data regarding students' performance and faculty productivity becomes a source of elaboration for what needs to be improved in curriculum design or teaching strategies.

Figure 3 draws our attention to the importance of data-driven analytics as a tool to facilitate the evidence-based financial planning, performance monitoring, and actionable decision-making processes, thus enhancing the strategic orientation of the management accounting practices in higher education institutions.

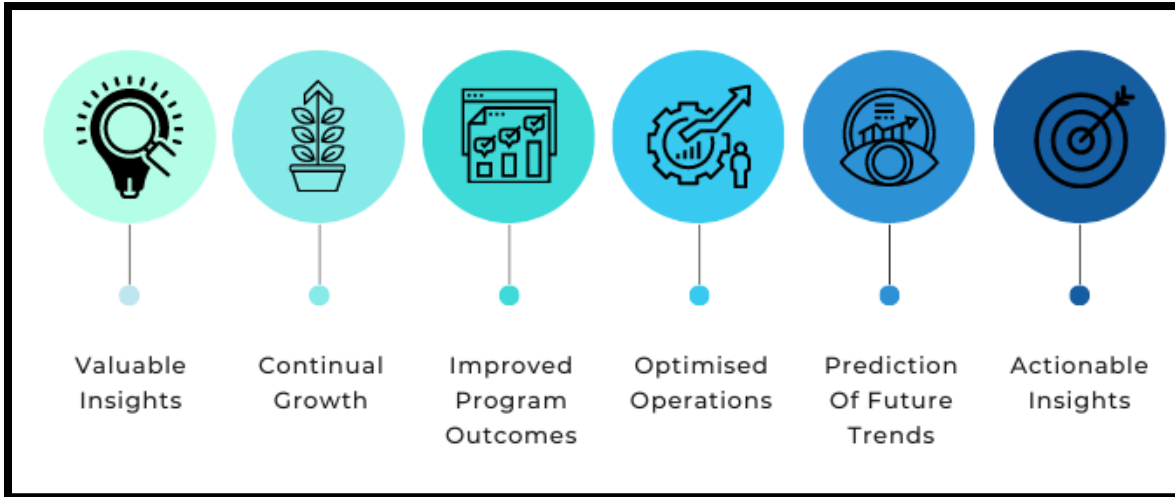


Figure 3:Benefit of Data-Driven Decision-Making and Analytics [11]

Image Source:<https://altisconsulting.com/au/insights/data-driven-decision-making/>

Data analytics allows universities to better forecast looming challenges in enrollment or funding, hence acting proactively against issues before they cause harm. Secondly, by employing live data to make decisions, it means that universities are better placed with adaptability to changes happening around them, for instance, changes in government funding or shifts in the demand for particular academic programs [12]. The use of SMA through data-driven insights enables an institution to make evidence-based decisions, which further enhances the accuracy of their financial planning and their ability to respond accordingly to the dynamic landscapes of education and finance.

2.4 Focus on Sustainability and Green Accounting

In response to growing environmental concerns and societal pressure for more responsible practices, universities are increasingly integrating sustainability into SMA frameworks. Green accounting could be defined as the measurement of the environmental impacts of university operations through appropriate measurement and management. It entails tracking such parameters as carbon emissions, energy consumption, waste generation, and financial costs related to sustainability initiatives [13]. This means that incorporating green accounting into SMA will not only enable universities to meet their environmental requirements but also help them exhibit their commitment to sustainability, a criterion that is gaining more significance among students, faculty, and donors.

Sustainable practices may give universities improved reputation and attract the attention of environmentally conscious people. Instead of locking on in an unreliable accusations, universities can understand and earn high public regard by implementing environment-corrective initiatives such as infrastructure for energy-efficiency improvements, using renewable energy, or the sustainability of supply chains [14]. It also helps achieve financial sustainability because it aids institutions in detecting cost-saving opportunities, such as by wasting less energy or producing reduced waste, which in turn can have long-term financial benefits.

2.5 Shift Towards Outcome-Oriented Funding Models

Outcome-based funding models in higher education thus mirror the general social need for results-based financial accountability. By this model, funding is directly related to achieved outcomes, such as student success, employment upon graduation, or better research impact by graduates and higher engagement in social life by graduates [15]. This is a different model from traditional funding, in which the timing of the expenditure or the number of students admitted defines access to funds.

Outcome-based funding nudges them to produce measurable output visible to the universities' strategic goals. For instance, universities will be funding more programs that exhibit better graduation rates, better employment opportunities for graduates, or outstanding contributions toward research and innovation [16]. This encourages universities to focus on programs and initiatives that will yield measurable success and utilize resources effectively in line with the goals of the institutions. Additionally, it enhances accountability on behalf of the universities, which are now required to demonstrate their performance against funding received. Finally, outcome-based funding shifts the focus to guarantee that higher education institutions contribute positively to students, society, and the economy, and at the same time achieve better practice financially.

While international studies largely portray Strategic Management Accounting as a mature governance tool embedded within autonomous and performance-driven higher education systems, the Indian context reveals a more fragmented and gradual adoption pattern. Prior global research emphasizes technological sophistication and managerial discretion as key enablers of SMA, whereas this review highlights that institutional autonomy, regulatory flexibility, and capacity-building remain more decisive determinants in Indian universities. This contrast indicates that SMA diffusion in India is shaped less by technological availability alone and more by structural and policy constraints.

3. CHALLENGES IN IMPLEMENTING STRATEGIC MANAGEMENT ACCOUNTING

Organizations face a number of challenges in implementing SMA. One key challenge is that there is a shortage of skilled people who are able to integrate advanced SMA tools with strategic planning. Organizational change is likely to be met with severe difficulty by companies familiar with traditional accounting practices. The lack of financial resources partly contributes to the data filling me using SMA practices and providing learning activities. Further, the demand to make SMA practices coherent with a constantly changing corporate environment and a myriad of legislative frameworks does nothing to make the movement to overcome these obstacles easier. Leadership commitment, training programs that are continuous, and personal approaches are necessary to guarantee both efficient implementation and end results.

3.1 Institutional Barriers to Strategic Management Accounting Implementation

One of the major challenges impacting the successful implementation of Strategic Management Accounting (SMA) in Indian higher institutions of learning is institutional resistance [17]. Most higher education institutions are still stuck in several old administrative and accounting models that stress normal financial reporting and adhering to regulations but not planning and performance measurement. These well ingrained practices bring inertia which makes organizational change slow and hard.

One of the institutional issues is the lack of awareness and knowledge on strategic value of SMA by the University administrators and decision-makers [18]. The functions of accounting are commonly viewed as relatively operational instruments designed to perform record-keeping, as well as to control the budget, but not as strategic instruments that can be utilized in long-term planning, resource optimization, and performance management. This parochial view decreases the institutional incentive to make investments in SMA-based reforms.

Moreover, the bureaucratic nature of the leadership systems in most institutions of higher learning in India is a contributory factor to innovation resistance [19]. Decision making is often centralized and bureaucratic and does not offer much flexibility and thus takes a long time to approve new accounting systems or new strategic initiatives. Without effective leadership commitment and institutional support, SMA implementation processes are likely to stay in piece-meal or symbolic form as opposed to being wholly incorporated in university management practices.

All in all, it can be said that this set of institutional constraints demonstrates that leadership-based change, the increased awareness of the strategic relevance of SMA, and the change in the organizational culture are required to facilitate the change of the traditional accounting practices to the more strategic management accounting model.

Table 1: Research Study

Author Name	Topic Covered	Research Study Title
Gichaaga (2014) [20]	Effects of management accounting practices on financial performance in manufacturing companies.	<i>Effects of Management Accounting Practices on Financial Performance of Manufacturing Companies in Kenya</i>
Hayter & Cahoy (2018) [21]	Strategic management in higher education and its alignment with societal responsibilities.	<i>Toward a Strategic View of Higher Education Social Responsibilities: A Dynamic Capabilities Approach</i>
Henry (2021) [22]	Overview of strategic management theories and their application in creating competitive advantages.	<i>Understanding Strategic Management</i>
Huyen et al. (2024) [23]	Factors affecting the implementation of SMA systems in SMEs in Vietnam's manufacturing sector.	<i>Factors Affecting the Implementation of Strategic Management Accounting Systems in Small and Medium Enterprises</i>
Kukreja & Shah (2024) [24]	Relationship between firm size and management accounting practices in the Indian steel industry.	<i>An Investigation Between Firm Size and Management Accounting Practices in the Steel Industry of India</i>
Langfield-Smith (2008) [25]	Review of SMA evolution over 25 years, addressing implementation gaps and future research directions.	<i>Strategic Management Accounting: How Far Have We Come in 25 Years?</i>
John (2021) [26]	Strategic management principles and the integration of SMA for operational alignment with goals.	<i>Strategic Management</i>

3.2 Financial Barriers to Adopting Strategic Management Accounting

One of the greatest barriers to implementing Strategic Management Accounting (SMA) in Indian universities is financial constraints, especially in the predecessor of the government-funded institutions that are mostly within the public sector of the higher education sector [27]. In such institutions, the allocation of budget is usually controlled and mostly focused on routine operation costs thus there is no financial leeway to strategic initiatives.

On the one hand, the deployment of SMA demands a high initial cost of the advanced accounting software, data analytics, integrated information system, and capacity-building programs of the academic and administrative staff [28]. To most universities that run under limited financial means, these expenses are seen as being prohibitive hence it is hard to justify SMA adoption in the long run even though it has long term benefits. As a result, strategic accounting infrastructure is often delayed or put second.

Moreover, there is a scarcity of specific financial resources to hire and keep professionals in strategic management accounting. Without competent individuals to build, deploy, and administrate SMA systems, the universities are having difficulties in skipping the accounting practices of the past. This has led to continued practice

of a short-term budget compliance and not long-term strategic planning in financial decision making which limits the successful institutionalization of SMA.

3.3 Regulatory and Policy Barriers

A major problem that hinders the successful application of Strategic Management Accounting (SMA) in the Indian universities is regulatory and policy constraints. The Indian higher education industry is in a complicated regulatory framework with various bodies governing it and extensive compliance provisions and strict accounting reporting codes. These policies tend to be more procedural accountable and legally compliant rather than being strategic in financial flexibility.

The majority of current financial policies are focused on the conventional budgeting practices, standardized reporting models, and pre-determined spending areas, which do not give much room to the adaptation of innovative and performance-based accounting practices [29]. Consequently, universities now face challenges in deploying the SMA tools to match the existing regulatory frameworks including the performance-based budgeting and strategic cost analysis. This mismatch will deter the adoption of SMA as the full financial management system by the institutions.

There are also bureaucratic decision making systems and time taking approval systems which further slow down the adoption of strategic accounting reforms. The lack of policy rules or incentives specifically relating to the SMA implementation gives ambiguity to the institutional leaders on the reforms that are allowed. As a result, universities tend to be risk-averse in their accounting decisions by continuing to seek traditional accounting methods as opposed to strategic management accounting projects that would result in greater long-term performance of the institutions.

Figure 4 shows that regulatory inflexibility and complexity of policies inhibits institutional flexibility and confine the incorporation of outcome-focused and strategic management accounting practices in Indian universities.

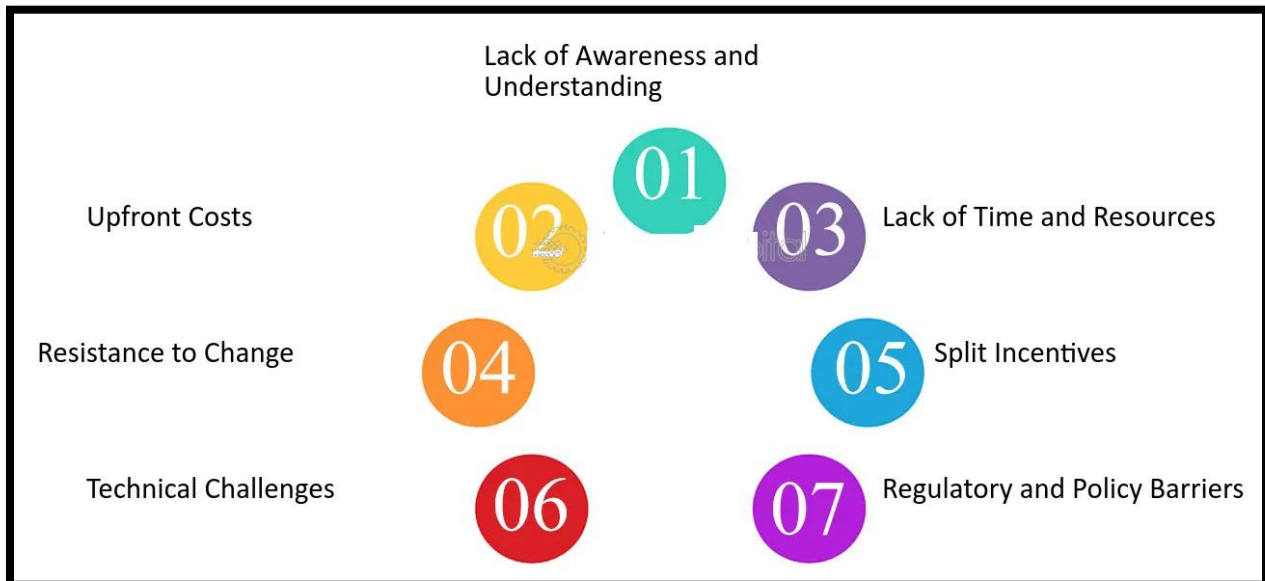


Figure 4: Regulatory and Policy Barriers [30]

Image Source: <https://fastercapital.com/keyword/regulatory-policy-barriers.html>

3.4 Technological Barriers to Strategic Management Accounting Implementation

One of the significant challenges facing the successful adoption of Strategic Management Accounting (SMA) in Indian universities is technological constraints especially in the small-sized institutions and those in semi-urban or rural areas. Most universities have continued to use haphazard or old fashioned information systems, which are not able to facilitate complex strategic accounting operations [31]. The lack of unified digital platforms makes the integration of financial, academic and operational data that is needed to make informed strategic decisions much harder.

The major technological challenge is that there is a low number of integrated management information systems that can assist SMA practices. The strategic management accounting is based on the provision of timely, accurate, and comprehensive information that is based on various departments such as finance, academics, human resources and administration. Nevertheless, without harmonized digital systems, data will be siloed in different departments and make it less reliable and strategic [32]. This discontinuity compromises the efficiency of SMA instruments like performance measurement, strategic cost analysis, and long term financial forecasting.

Besides infrastructure limitation, absence of technical know how also contributes to decreasing the adoption of SMA. Even in the case of the digital system, most universities have problems in operating, maintaining, and upgrading advanced accounting technologies [33]. This is due to lack of adequate training and technical support which makes institutions not totally utilize the available systems in strategic ways. Consequently, when they invest in technology, they often do so in a way that does not fully use their capabilities or is limited to the rudimentary administrative roles and not exploited as a means of strategic management accounting.

All in all, technological obstacles restrict the ability of universities to evolve the traditional accounting approach into strategic and data-driven financial management. It cannot be resolved only by investing in modern digital infrastructure since it is necessary to constantly train technologically and invest institutions in the harmonization of technology with strategic goals in accounting.

3.5 Human Resource Challenges in Strategic Management Accounting Implementation

One of the biggest obstacles to successful implementation of Strategic Management Accounting (SMA) in Indian universities is the human resource constraint [4]. SMA needs to be effectively implemented by using the special knowledge of the workers in the field of strategic accounting tools, data analysis, and financial planning focusing on the performance. Nevertheless, there is a lack of professionals who have been well trained in these advanced accounting practices in many higher institutions of learning.

The biggest problem is the recruitment and retention of talented SMA professionals. Universities are not well off competing with organizations in the private sector which have better remuneration packages and more evident career growth prospects [35]. This leads to high turnover rates even in cases of hiring qualified professionals, reducing the continuity and undermining the institutionalization of SMA practices in the long-term.

Besides the shortage of skills, the change resistance of the current academic and administrative employees further limits the adoption of SMA. Employees that are used to the traditional accounting systems might view SMA as complicated, time consuming or disruptive to the routine. This opposition is usually supported by a lack of training opportunity and institutional facilitation of career growth. The implementation efforts of SMA may not be successful without the systematic capacity-building efforts and the encouragement provided by leaders.

All in all, human resource issues demonstrate the necessity of specific training courses, incentives to develop the skills, and management change strategies to facilitate effective implementation of Strategic Management Accounting in the university system of governance.

Figure 5 highlights how human resource limitations, including the lack of skills, change resistance, and training opportunities, affect the successful performance of Strategic Management Accounting structures.



Figure 5: Human Resource Challenges [36]

Image Source: <https://www.hrinconsultants.com/challenges-of-hr-managers>

Existing international literature frequently attributes SMA implementation challenges to organizational resistance or technical complexity [37]. However, this review demonstrates that in Indian universities, these challenges are more deeply institutionalized, arising from rigid governance structures, constrained funding mechanisms, and prescriptive regulatory environments. Unlike global institutions where SMA barriers are often transitional, Indian universities experience these constraints as systemic, thereby requiring coordinated policy and institutional reforms rather than isolated managerial interventions.

4. OPPORTUNITIES AND FUTURE POSSIBILITIES IN STRATEGIC MANAGEMENT ACCOUNTING

In spite of such issues, Indian universities can take advantageous opportunities to enhance Strategic Management Accounting practices with the help of specific reforms and strategic initiatives. The development of digital technologies, the changing policy frameworks, and the growing interest in accountability and sustainability create a favorable environment of SMA adoption. Universities can increase the efficiency, transparency, and strategic performance of the long-term through alignment of financial management and institutional goals.

4.1 Integration of Emerging Technologies in SMA

The possibilities of combining Artificial Intelligence and Machine Learning into Strategic Management Accounting will transform how universities manage and enhance decisions related to finance and operation [38]. AI can process large volumes of data quickly and accurately to allow universities to have advanced predictors to determine future directions and outcomes. This means that decision-making is more proactive and informed and less on the reactive side. AI can optimize resource distribution by analyzing spending patterns, academic resource usage, and operational efficiency, all of which provide actionable insights for better strategic use of resources.

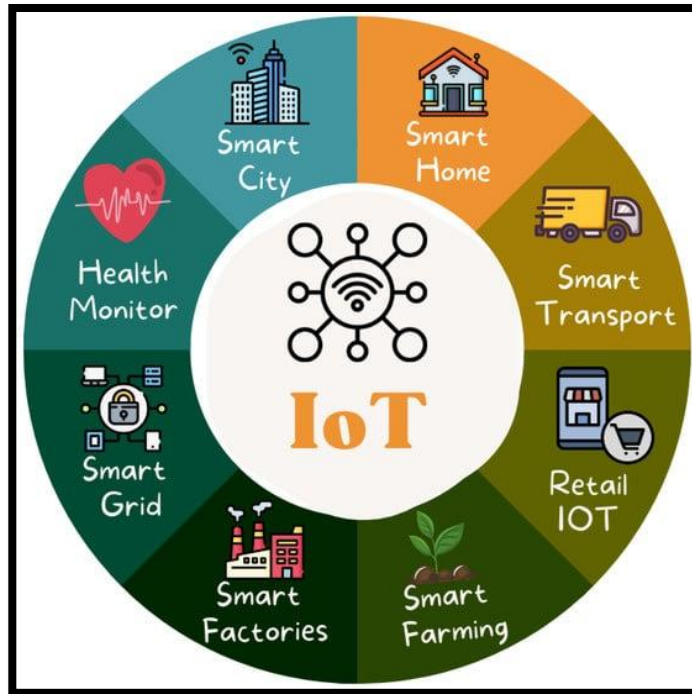


Figure 5: Integration of Emerging Technologies in SMA [39]

Image Source: <https://www.mdpi.com/1424-8220/22/23/9271>

There is further assistance in automating routine accounting tasks such as reconciliations, auditing, and financial reporting through machine learning. AI and ML streamline these tasks to minimize human error, while also increasing efficiency and freeing staff time for strategic roles. Further key to the integrations of SMA are the improvements happening on the Enterprise Resource Planning systems [40]. Modern ERP systems enable universities to gather, process, and manage real-time data across departments, from finance to student services, in support of comprehensive strategic decision-making. These systems enhance the accuracy of financial reporting, provide real-time insights on university performance, and simplify the operations of multiple units, ensuring that all stakeholders have access to accurate up-to-date information. With these technologies in place, universities are able to make better data-driven, strategic decisions that best fit long-term objectives.

4.2 Development of Specialized Training and Education Programs

For SMA to be adequately implemented in universities, it follows that great emphasis should be placed on building professional expertise within the institution [41]. Traditional accounting curricula do not focus much on the specific tools and techniques pertinent to the SMA. Therefore, there is a need for universities to invest in faculty-specific professional development programs to equip their employees with knowledge and skills required to manage strategic financial tasks. These training courses fill the gap between the traditional principles of accountancy and the more progressive, strategic practices inherent to SMA.

Therefore, equipping university staff with correct SMA tools allows workers to not only comprehend but also apply these concepts in daily work, which improves financial and strategic management overall. Staff can learn to orient their decisions to align with a broader institution-wide strategic goal, making financial management not only accurate but also optimized for sustainability. In addition, cooperation among academic institutions to develop customized curricula of SMA is essential [42]. Universities can create a new generation of managers and accountants, familiar with strategic financial decision-making, by introducing SMA into the context of their degree programs. These graduates will be equipped to contribute to handling the new challenges of contemporary financial environments on behalf of universities, reconciling academic and operative objectives with their institutional strategy.

4.3 Enhancing Collaboration Between Universities and Industry

One of the opportunities for the SMA adoption is collaboration among universities and the private sector. Collaboration with industry experts can give invaluable insights to best practices in SMA, particularly how private organizations implement SMA to achieve efficient and effective financial management [43]. Through such partnerships, universities can, therefore, have access to the latest trends, tools, and technologies to keep abreast of changing needs in the ever-evolving financial management landscape.

Further, these industry-university collaborations offer chances for the practical application of SMA principles in real settings. Universities can work closely with their industry partners so the SMA tools and techniques offered with adequate academic requirements are matched to industrial standards [44]. Thus, such collaborations connect the gap existing between academic theory and practical application, creating an environment where both academia and the industry learn from each other. Results are twofold: the industries achieve insightful financial management from the universities while also benefiting from the academic research that may promote new innovation into their own best practices. The relationship is of mutual advantage and contributes greatly to both worlds, stimulating greater SMA practice among higher learning institutions.

Table 2:Key Literature Summary

Author Name	Topic Covered	Research Study Title
Saputra et al. (2023) [45]	Mediation role of environmental management accounting (EMA) in linking green competitive advantage to sustainable performance.	<i>Mediation Role of Environmental Management Accounting on the Effect of Green Competitive Advantage on Sustainable Performance</i>
Seal et al. (2018) [46]	Comprehensive overview of management accounting principles and integration with strategic decision-making processes.	<i>Management Accounting, 6e</i>
Srivastava & Verma (2012) [47]	Core concepts, skills, and practices in strategic management for navigating competitive environments and aligning operations with long-term goals.	<i>Strategic Management: Concepts, Skills and Practices</i>
Teece (2019) [48]	Capability theory of the firm and its strategic management perspective, emphasizing dynamic capabilities for competitive advantage.	<i>A Capability Theory of the Firm: An Economics and (Strategic) Management Perspective</i>
Yao (2022) [49]	Effect of strategic management accounting practices on financial performance of small businesses in Ghana.	<i>Effect of Strategic Management Accounting Practices on Financial Performance of Small Businesses in the Ho Municipality of Ghana</i>

4.4 Policy Reforms for Supporting SMA Adoption

Government policy is very fundamental in the adoption and implementation of SMA in universities. Financial constraints prevent most universities from embracing high technologies that are associated with SMA, but government incentives or grants intended for technological improvements can help these universities overcome such constraints [50]. Governments, through financial assistance, will empower universities to invest in the tools and systems that require improving financial management and strategic decision-making processes. These investments help universities modernize their accounting systems, allowing for more accurate and comprehensive financial reporting. Apart from financial support, clear regulatory frameworks and guidelines for the adoption of SMA at the university level would ease its introduction into operations. Such frameworks would help to standardize SMA practices across the academic sector and provide universities with a structured approach for implementation. These rules alongside promoting policy observance should also arouse innovative and strategic thinking in universities. A suitable regulatory structure provides the universities with the clarity they need to apply SMA correctly but at the same time it does not hem log them in facilitating for them to develop strategies that cater for their specific situations. In conclusion, these reforms

will create atmospheres that will allow SMA to organically fit into university governance structures, thus, the organizing of collectives financial planning and resource reallocation.

Prior studies commonly frame future SMA development around advanced analytics and digital innovation. While such technological opportunities are relevant, this review underscores that in the Indian higher education context, the realization of these opportunities is contingent upon supportive policy reforms, leadership commitment, and professional capacity development. In contrast to global models that prioritize rapid technological deployment, Indian universities require a phased and context-sensitive approach to SMA adoption to ensure sustainability and institutional alignment.

5. CONCLUSION

The Research focuses on the changing nature of Strategic Management Accounting (SMA) activities in the Indian educational institutions through synthesis of nascent trends, issues of implementation and future opportunities in an orderly manner. The discussion indicates the increasing role of digital technologies, performance-based budgeting, and sustainability in the innovative strategic financial management in the institutions of higher education, whereas also pointing to the unresolved institutional, financial, regulatory, technological, and human resource obstacles. The value of the research is demonstrated by the synthesis of SMA adoption in Indian universities, which is structured and context-specific and offered through the prism of an integrated strategic, technological, and policy-based point of view. Incorporating the lessons learned in various literature sources and offering a set of concepts, the research contributes to the existing knowledge on how SMA might be used to enhance financial efficiency, strategic decision making and sustainability in institutions within the higher education sector. Further studies can be conducted using this framework by an empirical study, including a case study or a survey, to evaluate how effectively SMA has been applied in various kinds of universities. The comparative research between the public and private institutions and cross-country research would also contribute to the better understanding of contextual factors and present the evidence-based recommendations to policymakers and university administrators.

This study extends existing SMA literature by offering a context-specific synthesis of trends, challenges, and opportunities in Indian universities, emphasizing that strategic, technological, and policy factors must evolve in tandem. Unlike prior studies that primarily examine SMA adoption within corporate or Western higher education settings, this review provides a structured analytical framework tailored to the institutional realities of Indian higher education.

Acknowledgement

The authors would like to express their gratitude to all individuals and institutions that contributed to this study.

Funding

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Conflict of Interest

The authors declare no conflict of interest in the publication of this study.

Author Contributions

All authors contributed equally to the conception, design, analysis, and writing of this manuscript.
Ethics Approval

No human or animal subjects were involved in this research, and ethical approval was not required.

Data Availability

The data supporting the findings of this study are available upon reasonable request from the corresponding author.

Abbreviation

SMA - Strategic Management Accounting

ERP - Enterprise Resource Planning

AI - Artificial Intelligence..

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