CHAPTER-8

Conclusion and Recommendation

8.1 Introduction

This chapter serves as the concluding segment of the thesis, synthesizing the findings from the preceding chapters and offering a critical examination of the overall results. It articulates the distinctive contributions of the study to the advancement of FAE and FAR in India. By employing the methodologies detailed in chapter two, this chapter provides a succinct summary of the key findings derived from the analysis, emphasizing their implications for both academic discourse and practical application. Additionally, it critically addresses the limitations inherent in this study, particularly in areas that may affect the generalizability of the results. The chapter also proposes avenues for future research, identifying specific areas for further exploration that could enhance the understanding and development within the field of FA. This reflective approach not only reinforces the significance of the contributions of the study but also lays a foundation for ongoing scholarly research and practical improvements in FA practices in India.

8.2 Summary

This study aimed to explore the development of FAE and regulation of FAR in the global and specifically Indian context. To achieve its objectives, a sample of 668 participants was utilized, comprising 314 academicians and 354 FAPs. Both descriptive and inferential statistical analyses were employed to synthesize the collected data, while thematic analysis was conducted to interpret responses from open-ended questions. The following sections provide detailed findings corresponding to each research question, offering insights into the current state of FAE and FAR in India.

RQ 1: What is the status of FAE and FAR in global context?

The findings of the study reveal that out of sampled fifty countries, only four countries - India, the United States, Canada, and Australia - have specific standards in place to enhance the quality of FA practice. The USA has adopted "*Standards for Forensic Services (SSFS 1)*", Canada has implemented "*Standard Practices for Investigative and Forensic Accounting Engagements*", Australia has introduced "*APES 215 Forensic Accounting*

Services", and India has recently established "*Forensic Accounting and Investigation Standards*". In contrast, the study identified seven other countries - the United Kingdom, Belgium, Nigeria, Ireland, the Philippines, South Africa, and Pakistan - that have albeit implemented various codes of conduct, guidelines, directives, and procedures to regulate FA practice, but are yet to formulate any specific standards on FA. Notably, the majority of the countries under the study, thirty-nine in total, do not have any formal codes of conduct, guidelines, directives, or procedures or standards in place to govern FA practice. This finding highlights the need for more comprehensive regulatory frameworks to ensure the consistent and ethical delivery of FA services globally.

Regarding FAE, the study found that twenty-five countries offer FA courses at the undergraduate and postgraduate levels, as well as diploma and certificate programs. However, only four countries - Belgium, Nigeria, Ireland, and Pakistan - have professional institutes that deliver FAE and offer diploma and/or certificate courses on FA to their members. Furthermore, the study determined that the status of FAE remains low in twenty-one of the selected countries, suggesting that more attention is required to develop the necessary educational infrastructure to support the growth of the FA profession worldwide.

In India, FAE is still in nascent stage where only 39 state universities, 7 Central Universities, 5 Indian Institute of Management, 29 Private Universities and two institutes of national importance under Ministry of Home Affairs are providing FAE as a unit or topic or specific programme/specific course/ specialization/elective subject on FA.

RQ 2: What is the most requisite skill sets and techniques for an FAP?

The major skills identified during the course of the study are “analytical logical and critical thinking skills”, “skills to critically analyse financial statements”, “fraud investigation skills”, “unstructured problem-solving skills”, “deductive analysis”, “skills to evaluate the effectiveness of internal controls”, “professional scepticism and judgment”, “evidence gathering and compilation skills”, “persistence” and “text analysis”. The factor analysis reveals that four factors namely “Analytical and Investigative Skill”, “Interpersonal and Operational Skills”, “Technical and Digital Forensics Skills” and “Valuation and Litigation Expertise”, which accounts for 68.07% of the total variance, adequately summarise and explain the larger data set of 26 skills.

Both respondent groups ranked "analytical, logical, and critical thinking skills," "skills to critically analyse financial statements," and "fraud investigation skills" highly. However, distinctions in skill prioritization are evident between the two groups. The Mann–Whitney U-test (as per respondent group and gender classification) shows significant differences in the perceived importance of several skills. Further, the Kruskal-Wallis test indicates significant differences in the prioritization of essential skills for FA, revealing a widening gap based on experience levels. Experienced respondents consistently rated “analytical, logical, and critical thinking”, “unstructured problem-solving”, and “internal control evaluation skill” higher. The Jonckheere-Terpstra test further confirms a positive trend in the perceived importance of these skills as experience increases. However, certain skills, like “deductive analysis” and “persistence”, showed no significant change in perceived relevance, suggesting a plateau in their importance regardless of experience.

The study further reveals that requisite techniques for FAPs are “computer assisted audit technique (CAAT)”, “data mining technique”, “ratio analysis”, “digital evidence recovery techniques”, “relative size factor” and “Benford’s law”. The results from the Mann-Whitney U test indicate significant differences in the perceived importance of FA techniques between FAPs and academicians, revealing their distinct priorities duly shaped by their roles. FAPs place a higher value on “computer assisted audit techniques (CAAT)” and “data mining techniques” showcasing their reliance on automated tools for managing large datasets and uncovering hidden patterns in financial data. In contrast, academicians exhibit a lower emphasis on these techniques, suggesting a potential lag in integrating advanced technologies into academic curricula. Additionally, FAPs recognize the growing significance of artificial intelligence in FA, while academicians appear more hesitant to embrace its application, possibly due to unfamiliarity. Although both groups show some alignment regarding traditional methods like Benford’s Law, there remains a notable disparity in the valuation of advanced predictive models such as Bayesian Belief Networks and Deep Learning. These findings accentuate the critical need for FAE to align more closely with industry practices, particularly in incorporating advanced technologies, to adequately prepare future professionals for the complexities of financial crime investigations.

Further, the results from the Kruskal-Wallis and Jonckheere-Terpstra tests highlight the influence of experience on the perceived importance of various FA techniques. Significant differences were found in most techniques, with “trend analysis” and “data mining” showing the highest variance among experience groups. This indicates that with the increase in experience, their reliance on data-intensive methods increases, recognizing their utility in managing complex datasets and identifying financial irregularities. The Jonckheere-Terpstra test reconfirms positive trends for techniques such as “trend analysis”, “data mining”, and “digital evidence recovery”, revealing that these methods gain value with experience. However, techniques like artificial intelligence and Big Data analysis did not show significant trends, indicating a gap in their adoption across experience levels.

RQ 3a: What are the key challenges in FAE and FAR in India?

The study identifies several critical challenges in imparting FAE in India. Key issues include lack of awareness about the FA domain, absence of a well-structured FA curriculum, insufficient collaboration between professional institutes and universities in offering FAE, shortage of trained faculty, and difficulties in balancing theoretical instruction with practical application. These challenges hinder the effective delivery of FAE and emphasize the need for strategic initiatives to enhance educational frameworks to ensure that the future professionals are adequately prepared to meet the demands of the FA field.

Concerns regarding the "lack of awareness about the forensic accounting domain" and "absence of a proper forensic accounting curriculum" were raised by academics and FAPs as the key barriers to the development of FAE in India. Nonetheless, FAPs highlighted that the "lack of collaboration between professional institutes and universities" and the "limited provision for education on forensic accounting by the ICAI" impede the growth of FAE in India. On the other side, academicians highlighted concerns about career pathways and faculty development by ranking high the "lack of perceived career opportunities in forensic accounting" and "lack of trained faculty" as significant issues. Further, the Mann-Whitney U test results indicate significant differences in perceptions between FAPs and academicians on three major challenges namely, "limited provision for education on forensic accounting by ICAI (Provision only for its members)", "lack of collaboration

between professional institutes and universities for offering FAE" and "lack of faculty interest".

Regarding the regulation of FA, the study found that majority of the respondents believe that there is still a need for additional forms of regulation in India for governing FA. The major reasons raised for the additional regulation by the respondents are related to (1) need for regulatory bodies, (2) education and continuous development, (3) digital era and technological advancement, (4) evidence collection and legal framework, (5) practical and operational challenges, (6) enhancement of standards/ guidelines and (7) govt. and institutional roles. Further, the major challenges faced by FAPs in providing FA services are related to: (1) legal protection and recognition, (2) access to information and data management, (3) cooperation from stakeholders, (4) regulatory and professional framework, (5) security and liability concerns, (6) professional recognition and training, (7) barriers to entry and opportunities for small practicing firms and (8) fees and financial issues.

RQ 3b: What are the benefits of FAE?

The benefits of FAE as perceived by respondents include “enhance the level of awareness regarding frauds, fraud prevention & fraud detection to reduce corruption / fraud related cases in India”, “enhance the knowledge, skills and competence of qualified professionals taking up forensic accounting assignments”, “help in improving the quality and credibility of financial reporting” and “encourage students to engage in professional examinations like ICAI, ICMAI, ICSI as FA is an integral part of these courses”. However, there were notable difference between the two groups on the importance of each benefit of FAE.

RQ 3c: What is the most appropriate method of delivering of FAE?

Majority of the respondents supported structured educational approaches, with courses being the most preferred format. When exploring the preferences of academicians, an organised program is preferred while FAPs exclusively prefer it as a course.

RQ 3d: What is the most preferred discipline for imparting FAE?

The findings reveal that commerce consistently emerges as the most preferred discipline for delivering FAE through both topic and course-based methods, emphasizing its

foundational role in the field. Nonetheless, management is preferred for program-based delivery, which reflects the rising importance of professional degrees like an MBA in FA. Additionally, information technology is acknowledged as a vital component of FAE, especially in the program format, highlighting the necessity for educational institutions to design curricula that integrate these preferences and meet the evolving demand of students and industry. These revelations emphasize how crucial it is to match multidisciplinary methods with FAE programs in order to adapt to changing educational needs.

RQ 3e: What is the preferred educational level for FAE?

The exploration of preferred educational levels for FAE unfolds a strong inclination towards postgraduate programs, particularly among both academicians and FAPs. The low preference for diploma and certificate levels implies that respondents believe these to be insufficient for the depth of knowledge needed in the field, which emphasizes the necessity for higher education institutions to offer more demanding and specialized FAE programs.

RQ 4: Whether FA in India aligns with the sociological criteria of a profession?

The study explored the context of professionalism of FA in India through the lens of Pavalko's theory of professionalism. The study found that FA in India partially fulfils the professionalism criteria to became a profession. At present, FA in India satisfies five criteria namely, "intellectual technique", "relevance to social values", "motivation", "commitment" and "code of ethics". However, FA in India lacks "training", "autonomy", and "sense of community" to became a profession.

The study further reconfirms the qualitative results by assessing diverse views among respondents regarding its classification of FA. The largest respondent group marks FA as both a separate profession and a part of accounting. However, there is a potential for it to evolve into an entirely separate profession in the future.

RQ 5: What are the core curricula components and distinct pedagogies for FAE?

The study explores and identifies the key curriculum content and distinct pedagogies for FAE in India. The study reveals that the core curriculum for FAE should include topics such as "forensic accounting techniques", professional standards on forensic accounting",

“techniques for investigating conflicts of interest”, “financial reporting process and analysis” and “fundamentals of fraud”.

In this regard, the FAPs perceived topics such as "professional standards on forensic accounting," "forensic accounting techniques," "techniques for investigating conflicts of interest," "anti-fraud training" and "professional organizations (ICAI, ICMAI, ACFE, etc.) and careers in forensic accounting" as most pertinent. On the other hand, academicians were witnessed prioritising the topics such as "forensic accounting techniques," "theory and methodology of fraud examination," "techniques in locating hidden assets," "techniques for investigating conflicts of interest," and "financial reporting process and analysis including analytical review procedures".

Significant difference has been observed for several curriculum content based on both professional groups (FAP and academician) and gender. Further, the study identified signature pedagogies for FAE as “problem-based learning”, “case studies”, “computer forensics labs”, and “internships”. These pedagogies are integral to fostering practical skills and analytical abilities which will ensure that students are well-prepared for the complexities of FA. Incorporating these pedagogies will help to bridge the gap between academic knowledge and professional application.

8.3 Contribution of the Study

The current study makes a significant contribution to the understanding of FAE and FAR, particularly within the Indian context, while also offering a global perspective. By employing a comprehensive sample of academicians and FAPs, the study shed light on the critical gaps in FAE infrastructure, skill development, and regulatory frameworks in India and across countries. The findings emphasize the nascent stage of FAE in India, and the fact that it suffers censorious challenges such as the lack of structured curricula, insufficient collaboration between academic and professional bodies, and the need for trained faculty. Moreover, the study also provides insight into the most requisite skills and techniques for FAPs, revealing important distinctions between the priorities of FAPs and academicians. The detailed analysis of the global landscape of FAR further uncovers a deficiency in specific standards in most countries, calling for more robust regulatory mechanisms. Additionally, this study enriches the discourse on professionalism of FA in India by applying Pavalko’s theory of professionalism. The study identifies both areas of

alignment and gaps in training, autonomy, and community. By aligning its conclusions with the evolving demands of the profession, the study offers valuable recommendations for the future development of FA as a distinct profession, addressing both educational and regulatory imperatives. The study further explores and suggest the curriculum content and pedagogical approaches that needs to be implemented in FAE.

In conclusion, the findings of the study provide beneficial perspectives for stakeholders of FA to enhance the effectiveness of FAE and FAR. The challenges in FAE and FAR needs to be crucially analysed so that the desired benefits of FA will reach to the common people of the society. Therefore, the study bridges the gap and provides relevant evidences showing the current picture of FAE and FAR in India to make more robust FA model to enhance the quality of work of FAPs.

8.4 Recommendations

In light of the evolving landscape and the growing demand for specialized FA services in India, this study provides a set of policy recommendations aimed at enhancing the effectiveness and professionalism of FAE and practice.

i. *Increase Awareness of FA and FA Careers:* Raising awareness about FA and its viability as a career option is vital for attracting talent to the field. Highlighting its importance in combating financial fraud will encourage students to consider this specialization, thereby addressing the current skill gaps in the domain. Awareness campaigns such as workshops, conferences etc. can also showcase successful career paths within FA, enhancing its appeal.
ii. *Develop a Comprehensive FA Curriculum*: Integrating a comprehensive FA course at the postgraduate level within commerce programs is essential for equipping future professionals with the necessary skills and knowledge. A well-structured curriculum will ensure that students gain a thorough understanding of FA principles, techniques, and ethical considerations, thus preparing them for the demands of the field. Furthermore, integration of signature pedagogies into the FAE curriculum is vital to foster practical skills and critical thinking abilities.
iii. *Faculty Development Programs:* Implementing faculty development programs is necessary for enhancing the knowledge and skills of educators in FA. These programs should focus on up-to-date techniques and industry practices to ensure

that faculty members are well-equipped to teach in the evolving landscape of FA. By investing in faculty development, educational institutions can improve the quality of instruction and better prepare students for the challenges they will face in the FA domain.

iv. *Encouraging Collaboration Between Professional Institutes and Universities:* Strengthening partnerships between academic institutions and the industry to facilitate practical exposure through internships and guest lectures by experts is recommended. These collaborations will align academic knowledge and professional discourse, providing students with hands-on experience and insights into current practices in the field of FA. This collaboration may also create career opportunities for students which will bridge the gap between academia and industry while developing a more integrated approach to FAE.

v. *Incorporate FA as a Course in Postgraduate Programs*: Integrating FA as a core course in postgraduate curricula will enhance its specialization as a distinct field. This initiative will equip students with both theoretical foundations and hands-on skills, preparing them for complex financial investigations. By fostering advanced expertise, it will contribute to building a more competent, specialized, and professional workforce in FA which will align education with industry demands.

vi. *Incorporate Advanced Technological Tools:* The incorporation of advanced technological tools and techniques into both the FA curriculum and practice is imperative. As financial crimes become increasingly sophisticated, equipping professionals with cutting-edge tools will enhance their ability to detect and prevent fraud effectively. Educational institutions should prioritize technology integration to ensure that graduates are well-prepared for the evolving landscape of FA.

vii. *Address Legal and Personal Security Concerns*: To protect FAPs, it is essential to establish robust policy frameworks that address their legal and personal security concerns. This includes clear guidelines on confidentiality, legal protections, and support systems to ensure that professionals can operate without fear of retaliation or legal repercussions. Such measures will enhance the integrity and effectiveness of FA practices in India.

viii. *Build a Supportive Community for FAPs:* Creating a supportive community for FAPs is crucial for fostering collaboration, knowledge sharing, and professional growth. Establishing networks and training facilities will provide FAPs with

opportunities to learn from each other, share best practices, and stay updated on industry trends. This collaborative environment will enhance their skills and confidence in tackling complex financial issues. Universities like National Forensic Science University, Rashtriya Raksha University being institutes of national importance can be collaborated with the professional accounting bodies to provide hands on training to the FAPs on new technologies to reduce the financial crimes in India. Further, universities should include internship program in the course to equip students with a practical exposure in FA.

ix. *Government Intervention for Clear Guidance*: Government intervention is necessary to provide clearer guidance and support in the FA domain. This includes clarifying the distinctions between "FAU" and "FA", which will help streamline practices and improve understanding among stakeholders. Currently there is a clear mismatch between the regulatory bodies and professional accounting bodies like ICAI. Regulatory bodies like Reserve bank of India, Securities and Exchange Board of India are using the term "FAU" in their regulation. However, FAIS issued by ICAI clearly mentioned that FAPs should not use the term "FAU". Therefore, enhanced governmental intervention can facilitate the establishment of standardized practices that align with international norms.

x. *Strengthening Ethical Standards and Regulatory Framework:* With respect to the ethical code of conduct, the current FAIS primarily regulate the practical and ethical behavior of FAPs, specifically members of the ICAI (Mandatory for ICAI members only). However, this study recommends amendments, particularly in relation to entry requirements for the FA domain. Government intervention is crucial, given the diverse range of professional institutions producing FAPs in India. The establishment of a centralized regulatory authority may be necessary for harmonizing standards across the industry.

8.5 Limitations/ Future Research Avenues

i. *Restricted to Academicians and FAPs:* The current study focused on academicians and FAPs, yet other key stakeholders such as police officials, investigator, bankers, and legal professionals also have significant roles and interests in FA. Future studies can incorporate these groups to provide a more comprehensive understanding of perspectives across the broader ecosystem.

ii. *Curriculum Content Analysis:* Given the limited number of universities offering FAE in India, the study did not include a content analysis of existing curricula. As more institutions develop FAE programs, future studies can undertake a thorough content analysis to assess and enhance curriculum quality.

iii. *Inclusion of Diverse FAP Qualifications:* This study included only FAPs with the FAFD certification. Future studies can include FAPs with different FA qualifications, such as those certified by ICMAI or IndiaForensic, to provide a more nuanced views on FAR from multiple certification perspectives.

iv. *Comprehensive Curriculum Design:* While the study is limited to identifying curriculum content and pedagogy for FA courses, future studies can extend this work by providing a detailed curriculum, including course objectives, evaluation methods, and learning experiences to foster an effective educational framework.

v. *Need for Scale Development and Validation:* There is a lack of studies on the development and validation of scales to measure FA and its practice. The study can form the base for developing validated scales to enhance the reliability and rigor of FA studies, thereby supporting more advanced statistical analyses.

vi. *Impact of FAUs on Firm Performance:* Considering the SEBI's directive that firms must publish FAU reports, future study could explore the impact of FAUs on firm performance. Such an analysis would provide insights into the broader economic and organizational implications of forensic practices.

Thus, this study has made significant strides in documenting a comprehensive understanding of FAE and FAR in the Indian context, while highlighting the gaps and opportunities for their development. Yet, as Marie Curie once said, *"One never notices what has been done; one can only see what remains to be done",* this work not only lays the foundation, but also serves as a call to action for future research to further explore and address the evolving challenges in this critical field.