International Journal of Trade and Commerce-IIARTC
July-December 2020, Volume 9, No. 2 pp. 427-436
ISSN-2277-5811 (Print), 2278-9065 (Online)

COSMOS (Germany) JIF: 5.135; ISRA JIF: 6.717; NAAS Rating 3.55; ISI JIF: 3.721

Study of Impact of Demographic Variables on Forensic Accounting for Accountability and Fraud Investigation

Abhishek K. Gandhi[1*], Manisha M. Barad[2]
[1]*Department of Commerce and Accountancy, Sir K.P. College of Commerce, Surat, Gujrat, India*
(Affiliated To Veer Narmad South Gujarat University)
E-mail: skpccabhisheksir@gmail.com
[2]*Department of Commerce and Management, KSKV, Kachchh University, Gujrat, India*
E-mail: drmanisha.kachchh.uni@gmail.com

Abstract
The topic of Forensic Accounting has not been amongst the favourites from the research perspective. However, there are several aspects related to Forensic Accounting, on which research can be conducted such as the Existing Level of Knowledge, Attitude of the Professionals towards Forensic Accounting, Factors which affect the effective implementation of Forensic Accounting, Procedures actually undertaken by the organizations for Fraud Identification & Detection, Policies and Strategies framed for the purposed of Fraud Detection and Prevention. Keeping in view all the aforementioned Factors, this research paper has specifically taken into consideration demographic factors like Gender, Age Group and Work Experience in specific and it's impact on specific selected scale variable of Forensic Accounting towards Fraud Investigation like Attitude, Benefits, Limitations, Factors affecting the Implementation and Stated Procedural implementation. The research has been carried out by use of Statistical Techniques such as Chi-Square Test, Mann Whitney U Test and Kruskal Wallis Test based on the type of data set involved i.e, Uni-Variate, Bi-Variate and Multi-Variate. After the data generated was analysed and interpreted, the findings are that Gender has no influence, but Age Group category and Experience Group Category certainly has an influence on the specific variables towards Forensic Accounting. Hence, it can be concluded that Forensic Accounting's implementation is well appreciated by Male and Female equally. Also, Organizations should not only appoint the young and enthusiastic professionals who have a different outlook, but should also retain the experienced professionals for seeking the benefits of knowledge gained over a period of time.

Key Words: *Forensic Accounting, Demographic, Gender, Age Group, Experience*

PAPER/ARTICLE INFO
RECEIVED ON: 08/11/2020
ACCEPTED ON: 07/12/2020

Reference to this paper should be made as follows:

Gandhi, Abhishek K., Barad, Manisha M. (2020), "Study of Impact of Demographic Variables on Forensic Accounting for Accountability and Fraud Investigation", *Int. J. of Trade and Commerce-IIARTC*, Vol. 9, No. 2, pp: 427-436

**Corresponding Author*
doi: 10.46333/ijtc/9/2/16

I) INTRODUCTION

Forensic Accounting is an Integration of Accounting Skills, Auditing Skills, and Investigative Skills. It is the identification, interpretation, and communication of the evidence of economic transactions and reporting events. Thus, it is a specialty practice area of accounting that describes engagements, which arise from anticipated disputes or litigation.

II) LITERATURE REVIEW

The study has considered several incidents of Fraud that have taken place over centuries at both the levels – National and International levels. Out of several such cases of Frauds referred, here is the list of few most prominent issues:

a) In World Economies

- 1817: A Canadian Case
- 1920: The Ponzi Scheme
- 1995: Bologna and Lindquist
- 2002: Krell
- 2003: The Parmalat Scam
- 2005: Coenans
- 2008: The Madoff Scam
- 2008: Lehman Brothers
- 2010: Fitzhugh

b) In Indian Economy

- 1992: Harshad Mehta Scam
- 1995: Chara-Ghotala Scam
- 2008: 2G Scam
- 2009: Satyam Scam
- 2010: Food Items' Allocation Scam
- 2010: CWG Scam
- 2012: Coal Scam
- 2013: Sharda Group Scam

III) RESEARCH METHODOLOGY

A) STATEMENT OF THE PROBLEM

It is prevalent that Top-level Management's wrong attitude towards fraud risk assessment in particular and fraud prevention in general acts as a hindrance to the development of a healthy system. Companies certainly need to invest in fraud control mechanisms for long term sustainability. For that purpose only, identifying fraud risk indicators that companies face is essential and ensures that managers' and directors' approach towards fraud risk control is also strict. Quantitative research focuses more on digits that can be manipulated. However, qualitative measurements may give some valid suggestions to this research. So present study tries to solve the impact of specific demographic variables concerning certain variables related to Forensic Accounting. These scale variables include Attitude, Benefits, Limitations, Factors affecting the implementation, and Stated Procedural performance.

B) Research Question(s):

In this research, the researcher formulated the following questions:

1. What are the major prominent factors that affect the use of forensic accounting?
2. What is the attitude of professionals towards forensic accounting?
3. Which are the factors affecting the effective implementation of Forensic Accounting
4. What are the procedures implemented by the organizations for Fraud Detection and Fraud prevention?

C) Objectives of the Study:

1. To know the impact of gender on attitude towards Forensic Accounting.
2. To analyze the impact of the Age Group on attitude towards Forensic Accounting
3. To study the effect of Workfield Experience on attitude towards Forensic Accounting.

D) Hypotheses for the Study:

Following statistical hypotheses have been framed:

$H_0$1: There is no significant difference in the attitude of Professionals towards Forensic Accounting between Male and Female

$H_1$1: There is a significant difference in the attitude of Professionals towards Forensic Accounting between Male and Female

$H_0$2: There is no significant difference in the attitude of Professionals towards Forensic Accounting between different Age groups

$H_1$2: There is a significant difference in the attitude of Professionals towards Forensic Accounting between different Age groups

$H_0$3: There is no significant difference in Professionals' attitudes towards Forensic Accounting between different work fields.

$H_1$3: There is a significant difference in Professionals' attitudes towards Forensic Accounting between different work fields.

E) Research Design

This study used a **Descriptive Single - Cross-Sectional** research design where accounting professionals have been asked for responses at one point in time.

F) Data Collection

Primary Data

- **Survey Method**

To obtain the accounting professionals' relevant information, the researcher **interviewed** respondents with a **Structured Questionnaire** and conducted an online survey through Google forms circulated among professionals.

G) Sampling Design

Population	All Accounting Professionals across the major cities of the State of Gujarat and Maharashtra
Sampling Method	Non-Probability Convenience

Sampling Elements	• Professionals who are: a) Working in the Corporate Sector OR b) Are Practicing Professionals
Sample Size	• Accounting Professionals: 384
Survey Area (Major Cities of the States of Maharashtra and Gujarat)	• Mumbai • Pune • Surat • Baroda • Ahmedabad • Rajkot

H) Data Coding and Data Cleaning

The data collected from the structured questionnaire are coded and cleaned with the help of statistical software. Further, the coded data were analyzed by performing Univariate, Bi-variate, and Multivariate data analysis.
The software used were: IBM-SPSS 21 and Microsoft Excel.

I) Statistical Techniques for Analysis

- Univariate data analysis
  - Frequency distribution in tabular form
- Bivariate data analysis
  - Mann-Whitney U Test
- Multivariate data analysis
  - Kruskal Wallis Test

IV) DATA ANALYSIS & INTERPRETATION

To achieve the methodology mentioned above in the method, the researcher has used various statistical techniques and done hypothesis testing to generalize the population. However, to perform a one-sample t-test or any other parametric test, three assumptions need to be fulfilled: 1) Random Sampling, 2) At least Interval Data, and 3) Normal distribution of data.
But since two out of the three assumptions are not getting fulfilled, a parametric test of one sample t-test cannot be performed. Therefore, the researcher has applied non-parametric tests only.

A) Frequency Distribution

General Information:

Table:1 Gender of the Accounting Professionals

		Frequency	Percent	Cumulative Percent
Gender	Male	234	60.9	60.9
	Female	150	39.1	100.0
	Total	384	100.0	

Source: SPSS Output

Table:2- Age category of accounting professionals

		Frequency	Percent	Cumulative Percent
Age	21 - 30 Years	54	14.1	14.1
	31 - 40 Years	225	58.6	72.7
	41 - 50 Years	89	23.2	95.8
	51 - 60 Years	12	3.1	99.0
	Above 60 Years	4	1.0	100.0
	Total	384	100.0	

Source: SPSS Output

Table:3 Experience of Accounting Professionals

		Frequency	Percent	Cumulative Percent
Experience in Years	1 - 5 Years	56	14.6	14.6
	6 - 10 Years	197	51.3	65.9
	11 - 15 Years	94	24.5	90.4
	16 -20 Years	18	4.7	95.1
	Above 20 Years	19	4.9	100.0
	Total	384	100.0	

Source: SPSS Output

B) **Differences in Gender (Mann-Whitney U Test):**

H0: There are no significant differences in the mean rank of selected variables for gender category

H1: There are some significant differences in the mean position of selected variables for the gender category

Table:4 Mann Whitney U Test Results for Gender

	Gender	N	Mean Rank	Test Statistics
AVG_ATTITUDE	Male	234	193.54	-0.328 (0.743)
	Female	150	190.87	
	Total	384		
AVG_BENEFIT	Male	234	194.85	-0.616 (0.538)
	Female	150	188.84	
	Total	384		
AVG_LIMITATION	Male	234	191.86	-0.159 (0.874)
	Female	150	193.50	
	Total	384		
AVG_FACTOR	Male	234	185.71	-1.785 (0.074)
	Female	150	203.10	
	Total	384		
AVG_PROCEDURE	Male	234	194.44	-0.489 (0.625)

	Female	150	189.47	
	Total	384		

Source: SPSS Output, () Value indicates probability value compared at 5% Sing. Level

Table number 4 indicates the Mann-Whitney U test results for all selected variables in the study. Mean rank is found to differ for all the variables under review for the male and female category, but it seems statistically insignificant. Looking at the test statistics, all tested value is negative and very low. Moreover, parenthesis values indicate a two-tailed probability value greater than 0.05 for all the variables under study. We strongly fail to reject the null hypothesis and interpret no significant differences in the mean rank of accounting professionals' attitude.
In other words, we can say that there are no differences in the mindset of professionals towards forensic accounting, opinion for benefits and limitations, factors determining usage of forensic accounting, and procedural statements between males and females.

C) **Differences in Age Category (Kruskal Wallis Test):**
H0: There are no significant differences in the mean rank of selected variables for the age category

H1: There are some significant differences in the mean rank of variables chosen for the age category

Table:5 Kruskal Wallis Test Results for Age Categories

	Age	N	Mean Rank	Test Statistics
AVG_ATTITUDE	21 - 30 Years	54	151.83	17.583 (0.001)
	31 - 40 Years	225	199.05	
	41 - 50 Years	89	197.41	
	51 - 60 Years	12	206.50	
	Above 60 Years	4	222.00	
	Total	384		
AVG_BENEFIT	21 - 30 Years	54	192.68	0.144 (0.998)
	31 - 40 Years	225	191.40	
	41 - 50 Years	89	193.97	
	51 - 60 Years	12	200.42	
	Above 60 Years	4	195.25	
	Total	384		
AVG_LIMITATION	21 - 30 Years	54	204.47	10.592 (0.032)
	31 - 40 Years	225	179.48	
	41 - 50 Years	89	211.52	
	51 - 60 Years	12	220.17	
	Above 60 Years	4	257.00	
	Total	384		
AVG_FACTOR	21 - 30 Years	54	182.06	3.866 (0.424)
	31 - 40 Years	225	190.56	
	41 - 50 Years	89	198.84	

	51 - 60 Years	12	204.38	
	Above 60 Years	4	265.88	
	Total	384		
AVG_PROCEDURE	21 - 30 Years	54	225.02	12.452 (0.014)
	31 - 40 Years	225	190.80	
	41 - 50 Years	89	176.89	
	51 - 60 Years	12	221.54	
	Above 60 Years	4	109.00	
	Total	384		

Source: SPSS Output, () Value indicates probability value compared at 5% Sing. Level

Table number 5 indicates the Kruskal Wallis test results for selected variables for the study. Scale variables are considered as attitude, benefit, limitation, factors, and stated procedural implementation and age category, which are more than two independent variables. All mean ranks are different in absolute terms but let's look at the hypothesis testing results given probability values.

Talking about forensic accounting professionals' attitude towards forensic accounting, test statistics is 17.583, which is relatively high with a probability value of 0.001, which is less than 0.05, so we reject the null hypothesis and interpret that there is a significant difference in mean rank of the attitude of professionals towards forensic accounting amongst age categories. However, more than 200 mean ranks were found for above 50 years of professionals; otherwise, the rest are almost equal. There is a significant difference in professionals' attitudes when we bifurcate them as young and old accounting professionals.

Further regarding benefits of forensic accounting seems identical among age categories, and test value is low at 0.144 with the probability value of 0.998, which is greater than 0.05, so we accept the null and interpret that there are no statistically significant differences among age categories regarding benefit received from forensic accounting to the companies.

Limitations of forensic accounting are also hypothesized as all age categories are equal in considering the limitation of forensic accounting, but this is not true. Again we reject the null hypothesis as the test value is 10.592 with a probability value of 0.032, which is less than 0.05 and interprets a significant difference in forensic accounting limitations among professionals' age categories. Again age between 31 to 40 years has the lowest mean rank, suggesting that young professionals have a different outlook regarding forensic accounting limitations.

Moreover, factors that determine the usage of forensic accounting techniques variables indicate no significant differences in mean rank among the professionals' age categories. The test value is 3.866 with a probability value of 0.424, which is greater than 0.05. Failure to reject the null.

Finally, talking about stated procedural implementation, the test value is relatively high at 12.452. The probability value of 0.014 is less than 0.05, so we reject the null hypothesis and interpret a significant difference in mean rank among age categories.

Overall, it is interpreted as substantial differences found in professionals' average attitude towards forensic accounting, consideration of limitation, and stated procedure implemented by the company. Simultaneously, there are no statistically significant differences found for forensic

accounting benefits and factors determining usage of forensic accounting among age categories. In other words, age has a substantial impact on professionals' attitudes, limitations, considerations, and procedural implementations.

D) Differences in Experience Category (Kruskal Wallis Test):
H0: There are no significant differences in the mean rank of selected variables for the experience category
H1: There are some significant differences in the mean rank of variables chosen for the experience category

Table:6 Kruskal Wallis Test Results for Experience Categories

	Experience	N	Mean Rank	Test Statistics
AVG_ATTITUDE	1 - 5 Years	56	152.25	18.158 (0.001)
	6 - 10 Years	197	199.53	
	11 - 15 Years	94	202.68	
	16 -20 Years	18	189.42	
	Above 20 Years	19	190.82	
	Total	384		
AVG_BENEFIT	1 - 5 Years	56	208.10	3.378 (0.497)
	6 - 10 Years	197	192.42	
	11 - 15 Years	94	188.34	
	16 -20 Years	18	164.58	
	Above 20 Years	19	194.34	
	Total	384		
AVG_LIMITATION	1 - 5 Years	56	205.99	7.950 (0.093)
	6 - 10 Years	197	187.81	
	11 - 15 Years	94	181.76	
	16 -20 Years	18	245.08	
	Above 20 Years	19	204.68	
AVG_FACTOR	1 - 5 Years	56	191.16	1.139 (0.888)
	6 - 10 Years	197	194.21	
	11 - 15 Years	94	189.15	
	16 -20 Years	18	178.75	
	Above 20 Years	19	208.32	
AVG_PROCEDURE	1 - 5 Years	56	227.59	10.900 (0.028)
	6 - 10 Years	197	185.96	
	11 - 15 Years	94	180.84	
	16 -20 Years	18	218.83	
	Above 20 Years	19	189.61	
	Total	384		

Source: SPSS Output, () Value indicates probability value compared at 5% Sing. Level

Table number 6 indicated the Kruskal Wallis test results for selected variables for the study. Scale variables are considered as attitude, benefit, limitation, factors, and stated procedural implementation and experience category, which are more than two independent variables. All mean ranks are different in absolute terms but let's look at the hypothesis testing results given probability values.

Talking about professionals' attitude towards forensic accounting, test statistics is 18.158, which is relatively high with a probability value of 0.001, which is less than 0.05, so we reject the null hypothesis and interpret that there are some significant differences in the mean rank of the attitude of professionals towards forensic accounting among experience categories. However, near 200 mean rank found for above five years of professionals experience, only 1 to 5 years of experienced professionals have the lowest mean rank. There is a significant difference in professionals' attitudes when we bifurcate in accounting professionals' experience.

Further regarding benefits of forensic accounting, limitations and factors determining usage of forensic accounting seem equal among experience categories where all probability values are more significant than 0.05, so we accept the null and interpret that there are no statistically significant differences among experience categories regarding benefit received from forensic accounting, limitations, and factors considered to the companies.

Finally, talking about stated procedural implementation, the test value is relatively high at 10.900 with the probability value of 0.028, which is less than 0.05. We reject the null hypothesis and interpret some significant differences in mean rank among experience categories.

Overall, it is interpreted as substantial differences found in professionals' average experience attitude towards forensic accounting and the company's stated procedure. Simultaneously, there are no statistically significant differences found for the benefits of forensic accounting, limitations, and factors determining the usage of forensic accounting among experience categories. In other words, experience has a significant impact on the attitude of professionals and procedural implementations.

V) FINDINGS

General Profile:

1. The majority of professionals are found to be male, i.e., 60.9% compared to female.
2. 31 – 40 years of age professionals are more in the present study covering 58.6% while cumulative 95.8% professionals are between 21 to 50 years which may be considered young professionals.
3. Majority of the respondents having experience in this field between 6 to 15 years, covering almost 75% of total respondents.

Differences in gender, age, and experience:

1. It was found that there is no significant difference in gender category regarding the attitude of professionals towards forensic accounting, perceived benefits and limitations of forensic accounting, factors determining usage of forensic accounting, and implementation of the stated procedure.
2. Further differences are found among age categories regarding professionals' attitudes, and the significant differences lie in beyond 50 years of age of professionals. Moreover, differences are observed in perceived limitation and stated procedural implementation.

3. There are differences found among the experience category in terms of attitude and displayed procedural performance; the rest of the variables show no differences among experience categories.

VI) CONCLUSION

Forensic accounting is a concept making aware and alert about the frauds and malfunctioning in the organization by providing careful investigation of accounting activities. The study tried to determine the differences in attitude amongst the age, gender, and experience category. A total of 384 sample professionals are chosen for the analysis and selected using the non-probability convenience sampling method. The study used frequency distribution analysis, chi-square goodness of fit test, Mann-Whitney U test, and Kruskal Wallis test to analyze primary data collected. Finally, the study concludes from the hypothesis test that there is no significant difference in gender category regarding the attitude of professionals towards forensic accounting, perceived benefits and limitations of forensic accounting, factors determining usage of forensic accounting, and implementation of the stated procedure. Further differences are found among age categories regarding the attitude of professionals. Moreover, differences are observed in perceived limitation and stated procedural implementation. There are differences found among the experience category in terms of mentality and said procedural performance. The rest of the variables show no differences among experience categories.

REFERENCES:

[1] Association of Certified Fraud Examiners, 2004 Report to the Nation on Occupational Fraud and Abuse (Austin, Tex.: Association of Certified Fraud Examiners, 2004), ii, http:// www.cfenet.com/pdfs/2004RttN.pdf.

[2] Business Standard; "Saradha swallowed Rs. 2000 crores"; http://www.business-standard.com/article/current-affairs/saradha- swallowed-rs-2-000-cr-panel-113102900613_1.html; (2013, Oct, 13.)

[3] Federal Bureau of Investigation; "White Collared Crime"; https://www2.fbi.gov/whitecollarcrime.htm; (2014).

[4] ICAI; "Study on Investigative Audits"; ICAI Publications; New Delhi; 2011; Pages7-17.

[5] Pricewater house Coopers, European Crime Survey 2001, 1, http://www.pwcglobal.com/cz/eng/inssol/publ/Euro_fraudsurvey_2001.pdf.

[6] Preeti Singh, (2012), "Forensic Accounting Concept in India," International Journal of Trade and Commerce-IIARTC, Vol. I, NO. I, pp. 100-105.

[7] Sheela Bhat; 'All you needed to know about the fodder scam"; http://www.rediff.com/news/report/all-you-need-to-know- about-the-fodder-scam/20131001.htm; (2013, Oct, 01)

[8] The Hindu; "CBI registers Preliminary Enquiry into recruitment scam in CWG";http://www.thehindu.com/news/national/cbi-registers-preliminary-enquiry-into-recruitment-scam-in-cwg/article2512437.ece;(2011, Oct,04