



# NIGERIAN JOURNAL OF ACCOUNTING RESEARCH

**A Publication of The Department of Accounting,  
Ahmadu Bello University, Zaria-Nigeria**

**Vol. 12, Number 2, December, 2016**

<https://njar.org.ng/>

## **EFFECT OF INTELLECTUAL CAPITAL ON RETURN ON ASSETS OF INSURANCE FIRMS IN NIGERIA**

**<sup>1</sup>Ngozi Ben Anuonye (PhD), <sup>2</sup>Sunday Mlanga (PhD) and <sup>3</sup>Luke N. Onuoha (PhD)**

<sup>1</sup>Department of Accounting & Finance, Crawford University, Igbesa, Ogun State  
e.mail: [benanuonye@yahoo.com](mailto:benanuonye@yahoo.com), GSM: 08033164620

<sup>2</sup>Department of Accountancy, Federal University Ndufu-Alike, Ikwo, Ebonyi State  
e.mail: [sundaymlanga@yahoo.com](mailto:sundaymlanga@yahoo.com), [Sunday.mlanga@funai.edu.ng](mailto:Sunday.mlanga@funai.edu.ng),  
GSM: 08068403973

<sup>3</sup>Department of Accounting, Babcock University, Ilisan, Ogun State  
e.mail: [lkonu@yahoo.com](mailto:lkonu@yahoo.com), GSM: 08034023357

### **Abstract**

*Intellectual Capital (IC) needs to be measured by insurance entities. The inability of firms to measure and quantify intellectual capital has posed fundamental problems overtime in the value measurement of firms. This study evaluates the effect of HC and IC on the value creation of insurance firms in Nigeria using their ROA. Ex-post facto research design was adopted using primary and secondary data. The target population consisted of 150 workers in the 3 strategic departments of human resources, accounts and marketing of 18 insurance companies using purposive sampling technique. 150 questionnaires were distributed and a response rate of 74% was recorded. Face validity, content validity and pilot test were used to validate the instruments. The Cronbach's Alpha reliability test gave a result of ( $r=0.806$ ) and ( $r=0.800$ ) respectively. Regression was used for data analyses at 5% level of significance. Results obtained from the primary data revealed that structural capital had significant positive effect on ROA at ( $P<0.05$ ) while relational capital also had a significant positive effect on ROA at ( $P<0.05$ ). Aggregated P value for f-statistic was significant on ROA at ( $F=.000<.05$ ) from the primary data. Secondary data analysis revealed that human capital was negatively significant on ROA at ( $P<0.05$ ). Relational capital was also positively significant on ROA at ( $P<0.05$ ). The aggregated f-statistic on secondary data*

*Effect of Intellectual Capital on Return on Assets of Insurance Firms in Nigeria*

*was significant on ROA at ( $F=.015<.05$ ). The study concluded that human capital (HC), structural capital (SC) and relational capital (RC) each had statistical weak relationship with return on assets (ROA) of insurance companies in Nigeria.*

**Keywords:** *Human resources accounting, human capital, intellectual capital, structural capital, relational capital.*

## **1.0 Introduction**

Human resource accounting disclosures and intellectual capital measurement are grossly inadequate despite the prominence given to the efforts of the workforce in the annual financial statements of companies in Nigeria. It is true that human capital is acknowledged by the directors of companies, especially in the Chairman's Statement in the Annual Reports, yet such knowledge are not measured or articulated in the companies' financial reports. This means that the value of firms in Nigeria is under-reported.

In a study on the impact of investment in human resource training and development on employee effectiveness in Nigerian banks, Yahaya (2006) reiterates that an often repeated statement made by directors and chairmen of corporate organisations in their annual reports is "our main asset is our workers". Yet, this 'main asset' is neither measured nor included in the financial report of the enterprise. Using expenditures on the employee (salaries, wages and training costs) as well as other intrinsic values, human efforts in the organisation should actually be measured.

Again, Yuan (2001), whilst visualizing intellectual capital as an important component that reflects organizational capacity opined that intellectual capital is the potential ability of an organization and a carrier for knowledge application and skills innovation. This view was corroborated by Wang and Xu (2002) who identified intellectual capital as a wealth-creating instrument. They argue that capabilities and all kinds of knowledge elements were actually cited from intellectual capital. Measuring intellectual capital in the past seems insurmountable.

On the hand, Return on Assets (ROA) measures the effective use of the assets of an enterprise. It is a measurement of the earnings attributable to one naira of an asset owned or employed in an organization during a given period. The return on assets is arrived at by dividing the net earnings of a company by its total assets (Pandey, 2010). A high return on assets means that the company is using its assets efficiently and effectively (Flamholtz, 1999).

The objective of this study is to evaluate the effect of intellectual capital on return on assets of insurance companies in Nigeria. The question is: to what extent does intellectual capital measurement contribute to the Return on Assets of insurance firms in Nigeria?

## **2.0 Review of relevant literature**

### **2.1 Conceptual framework of intellectual capital**

The profitability and efficiency of a firm is positively affected by intellectual capital values in the modern economy. Flamholtz (1999) reiterates that the world economy has shifted from the industrial in which plant and equipment were the core assets to the post-industrial era in which intellectual capital is now the core asset. While most firms in the industrial era by definition relied on manufacturing capabilities, companies in the post-industrial era now rely almost completely on knowledge and information for survival and profit.

The basis for the above argument is corroborated by de Pablos (2003) and Bontis (2004) who argue that a company will gain a competitive advantage if intellectual capital is effectively harnessed in the organisation. The drivers of this intellectual capital advantage may be found in all employees' as well as the organization's ability to create value under a market assessment (Public, 2004). In other words, intellectual capital (Nielsen, Bukh, Mouritsen, Johansen & Gormsen, 2006) is represented by the company's stock, such as skilled employees, knowledge and management philosophy. The study and the measurement of intellectual capital on the profitability of insurance firms (Anuonye, 2014) is a key challenge to managers towards the fulfilment of their stewardship obligation to investors who rely on the financial information of such firms in evaluating the performance of the sector in Nigeria. Most importantly, such a study is expected to help the industry to formulate and implement strategies that will help develop its intellectual capital and guide them to benchmark themselves in order to improve their value creation. For example, the inclusion of intellectual capital contributions in the financial reports of early organisations such as R.G. Barry Corporation and Skandia Insurance Corporation (Edvinsson & Malone, 1997) helped to pioneer and increase awareness in the concept of intellectual capital reporting. (Anuonye, 2014) had categorised intellectual capital into three basic forms, namely:

#### **2.1.1 Human Capital (HC)**

Human capital is the value of all the workers in the organization with all the attendant rewards attached to their utilization (Verguwen & Alem, 2005). These

capabilities are peculiar to the workers because whenever they leave the organization, they go away with them (Roos & Roos, 1997).

Human capital is the generic term for the competences, skills, trainings and motivation of the employees. The human capital of the organisation comprises of all the qualities and professional skills the worker brings into the organisation. Human capital is owned by the worker and leaves along with him whenever he leaves the organisation. Human capital is the totality of all remunerations and rewards paid to the worker. Human capital (Namvar, Fathian, Gholamin, & Akhavan, 2011) is at the heart of intellectual capital measurement.

### **2.1.2 Structural Capital (SC)**

Structural capital is the supportive infrastructure that enables human capital to function in an organisation. Structural capital is owned by an organization and remains with it even when the worker leaves the organization. Structural capital consists of trademarks, patents, formulas, management style, company reputation, image, corporate culture, networking, mission and vision. It is the difference between non-thinking and thinking resources that use very different management methods such as culture, organizational processes, technology, absorptive capacity and information systems to achieve corporate goals (Namvar, Fathian, Gholamin & Akhavan, 2011).

This form of capital is of strategic importance in the corporate planning and growth of any organization. Structural capital refers to all structures deployed by the workers to drive the business processes. Structural capital is owned by the enterprise and remains with it even when the worker leaves the company. This form of capital can be evaluated on how employees, organisational units and different hierarchy levels of workers exchange information and co-operate together on organisational projects. Corporate culture, which is enhanced by structural capital, comprises of all values and norms, knowledge transfer and the working manner which is peculiar to every business enterprise. It also includes compliance to rules and the ability of the workers to handle failures corporately when they eventually occur. Structural capital is calculated as the difference between value added and human capital (Anuonye, 2014).

### **2.1.3 Relational Capital**

That which makes the customer to continuously repeat his patronage on a product or a firm can be referred to as relational capital. Relational capital is the inclination that the customers have over the goods and services of an organisation. It is the preference and loyalty that customers have over a company's brand over other products and services. Relational capital is the relationship which an organisation has with external groups and persons over time. This will include trade relationships with past, present and potential customers, suppliers, partners and the public at large (Anuonye, 2014). The organisation must maintain a high degree of salesmanship and marketability in order to achieve an appreciable level of relational capital.

## **2.2 Theoretical framework of intellectual capital**

Human resource accounting and intellectual capital measurement are currently based on a number of theories, models and definitions including: the Balanced Score Card (BSC), Skandia's IC Navigator, Economic Value Added (EVA),

Market Value Added (MVA), Tobin's Q Ratio, Intellectual Capital Services' IC-Index, The Technology Broker's IC Audit, Sveiby's Intangible Asset Monitor (IAM), Real Option Theory (ROT), Citation-weighted Patents, Value Added Intellectual Coefficient (VAIC).

### **2.3 Empirical framework**

Financial performance in relation to intellectual capital connotes notable actions or achievements which accrue to an enterprise as a result of human or intellectual capital measurement and application.

In private organisations, intellectual capital measurement appears difficult because data for its measurement might be scanty or non-existent. Beyond the inability of firms to measure intellectual capital, the general trend has been for management to recommend the layoff of the workforce as a way of reorganizational modification during periods of low profitability. This step or action on the workforce through layoffs may be counter-productive (Anuonye, 2014).

In May, 1995, Skandia Corporation, the top insurance and finance enterprise in Sweden, issued the world's first public Intellectual Capital Annual Report. This marked a shift from the previous annual reports which were only compiled for reference purposes in companies' reports. The result of this report was the formation of the Skandia Intellectual Capital Navigator, which not only measured intellectual capital, but also provided a framework for classification and a standard for the measurement of intellectual capital.

According to Flamholtz (1999), since organizations acquire intellectual capital to generate future revenues, it is therefore most appropriate that such human resources be considered when valuing a company by capitalizing instead of expensing such expenditures in the current period. The significance of this argument is that intellectual capital should be treated like the other assets. Since all assets are reported on the statement of financial position, these also should be reported along with physical assets.

The Value Added Intellectual Coefficient, VAIC (Baldini, Liberatore & Ridi 2011) approach is used to determine a firm's efficiency in using intellectual capital resources. The sample analysis used by these scholars consisted of financial sector companies listed on the Italian Stock Exchange for the period 2006-2008. Their findings fully confirm the existence of a positive relationship between accounting values and market values on the one hand and Intellectual Capital (IC) components as measured by VAIC and market value on the other

hand. Results show that investors attach more value relevance to Human Capital Efficiency (HCE) than to Structural Capital Efficiency (SCE) and that HCE plays an indirect role in the relationship between IC and market value.

According to Singh (2009) human resource costs can be categorized into Capital and Revenue Expenditure. He stated that Capital expenditure would include acquisition, development, retention, update, hiring, recruitment and training costs. Whereas Revenue expenditure would include wages, salaries, bonus, commission, perquisites, allowances, short-term motivation, efficiency and maintenance costs. He concludes that the value of human resources can be calculated either on the basis of Cost of Production approach or the Capitalized Earnings Approach. He affirmed that capital expenditures are written off over the expected life of the employees, while revenue expenditures are written off or charged into the company's Income statement of the current year. Rowbottom (1998) in his thesis on intangible asset accounting and accounting policy selection in the football industry in the United Kingdom corroborates this view, thus, that intellectual capital expenditure can be segregated into capital and revenue forms. This segregation (Anuonye, 2014) may not be clear-cut principally because of the problem of demarcation between the various costs.

In the insurance industry, intellectual capital measurement has not been widely adopted. Moslehi, Mohaghar, Badie and Lucas (2006) in their investigation of the intellectual capital measurement and management in the Iranian insurance industry concluded that in spite of the importance of intellectual capital measurement, the insurance industry in Iran largely ignores them. They conclude that the IC toolbox does not disclose the value of the firm's intellectual resources. However, Iswati and Anshori (2007) found that intellectual capital, though new in Indonesia, has influence on the insurance companies' performance in the Jakarta Stock Exchange.

Onafalajo, Eke and Akinlabi (2011) observe that accounting in insurance companies, using the new IFRS recommendations is relevant to the Nigerian financial environment but argue that the application of IFRS through the use of observable and unobservable market inputs as well as the experience variance of operators may be difficult in the short run but achievable in the long run. They identified that the inability of the workforce to uphold good ethical practices in insurance firms in Nigeria do negatively affect the practice of insurance. Though such unethical practices may work in the immediate and short run to reduce the number of claims payable, such practices will no doubt undermine the confidence of current and prospective clients and this would inevitably bring about adverse

effects on the reputation and performance of the industry in the medium and long run.

In a study on organisational knowledge management as a strategy for Nigerian insurance companies, Epetimehin and Ekundayo (2011) observe that intellectual capital, a vital corporate asset, will melt away unless companies do something to stop the brain drain and to retain critical knowledge. They opined that the survival of insurance companies in Nigeria is dependent upon the resolve of the workforce to eliminate unethical practices which are resorted to in avoiding liability under insurance policies. This assertion was collaborated by Alaka, Tijani & Abass (2011) when they identified the impact of strategic planning on the performance of the Nigerian insurance industry.

Furthermore, Appuhami (2007) concludes from his empirical study of the impact of intellectual capital on Thailand's financial sector that there is a significant positive relationship between investors' capital gain on shares and corporate intellectual capital. Ong, Yeoh and Teh (2011) investigate the intellectual capital efficiency in 43 food and beverage companies listed on the Malaysian Stock Exchange between 2008 and 2010. Using the VAIC (HCE, SCE, CEE), the outcome of their study revealed that the beverage companies have greater VAIC and intellectual capital efficiency (ICE) when compared to food companies over the 3 years period.

Yahaya (2006) using the quantitative measure published by the Institute of Intellectual Capital Research and approved by the Saratoga Institute measured the impact of investment in human training and development on employees' effectiveness in Nigerian banks between 2001 and 2005. Her study confirmed that an assessment of the human resource effectiveness of 3 commercial banks (Zenith, First and Union bank) showed that Zenith bank with the best human resource management and accounting practice performed better than First Bank and Union bank. Tongo (2010) in his article on accounting for intellectual capital sets out to highlight the embedment of intellectual capital accounting within the confines of strategic management. He recommends that just as in traditional accounting where independent auditors are assigned to verify the accuracy of financial reports; independent strategic managers who are external to the firm should be employed to cross-check and perhaps correct whatever information that is being reported by the intellectual capital accountants, that is, strategic managers of individual companies. He concludes that this process would help to authenticate or disapprove the contents of intellectual capital reports which are actually meant to facilitate the long term decisions that business stakeholders may be making.

To understand how the measurement of intellectual capital can favour intellectual capital mobilization, (Chicchi, 2013) examines the role of those who design and implement intellectual capital practices. Using the Kolb's experiential learning theory model, she opines that actors must complete an experiential learning cycle so as to enable them appreciate fully the contribution of intellectual capital in their organisations. The experiential learning theory model is an alternative way of understanding how intellectual capital measurement produces effects and how such effects can contribute to the mobilisation of intellectual capital in the industry.

Using a sample of 32 audited financial statements of quoted companies in Nigeria, Uadiale and Uwuigbe (2011) examine the impact of intellectual capital components on business performance measured with Return on Equity (ROE) and Return on Assets (ROA). The result of their study shows that intellectual capital has a positive and significant relationship with the performance of business organizations in Nigeria.

Using 14 banks as sample size, Zou and Huan (2011) carried out a study on the impact of intellectual capital on the performance of listed banks in China. They opined that capital employed efficiency (CEE) and structural capital efficiency (SCE) have a negative correlation with the technical efficiency (TE) using the Data Envelopment Analysis (DEA), while human capital efficiency (HCE) has a positive correlation with technical efficiency (TE). However, they conclude that the correlations between capital employed efficiency (CEE) and TE, human capital efficiency (HCE) and TE are not statistically significant.

### **3.0 Methodology**

Ex-post facto research design was adopted in the selection of data in the study. Primary and secondary data were employed. The target population and sample size of 150 workers respectively in the 3 strategic departments of human resources, accounts and marketing of the 18 insurance companies was used. Purposive sampling technique comprising of 150 questionnaires were distributed to respondents. The recorded response rate was 74%. Face validity, content validity and pilot tests were used to validate the instruments. The Cronbach's Alpha reliability test gave a result of ( $r=0.806$ ) and ( $r=0.800$ ). Regression was used for data analyses at 5% levels of significance.

#### 4.0 Results, Analyses and Discussion of Findings

##### Research Hypothesis

H<sub>0</sub>: Intellectual capital has no significant effect on Return on Assets of insurance firms in Nigeria.

##### Test of Hypothesis

A test of hypothesis was carried out in line with the research objective for the purpose of finding the relationship between intellectual capital and return on assets. The regression equation is given as:

$$Y = a + \beta_1 HC_{it} + \beta_2 SC_{it} + \beta_3 RC_{it} + \mu_{it}$$

Where: Y = Return on Assets, a = constant,  $\beta_1$  = coefficient of human capital,  $\beta_2$  = coefficient of structural capital,  $\beta_3$  = coefficient of relational capital,  $\mu$  = error level incorporating omitted variables, i = individual insurance firms, and t = time (number of years).

**Table 4.1: Hypothesis**

Variable	Coefficient	Std. Error	t-statistic	P value (Sig.)
Constant	-.139	.113	-1.238	.236
HC	.008	.013	2.809	.014
SC	.009	.013	.701	.495
RC	.010	.004	2.600	.021
R	.716			
R <sup>2</sup>	.513			
Adj. R <sup>2</sup>	.409			
F-stat.	4.920			
P value (F-stat)	.015			

Significant at  $\alpha = 0.05$

**Source:** Researcher's regression output (2016)

##### Interpretation

From table 4.1, the probability values were given as:  $P(x_1=0.014 < 0.05)$ ;  $P(x_2=0.495 > 0.05)$  and  $P(x_3=0.021 > 0.05)$  respectively. The results show that structural capital had statistically insignificant impact on return on assets of the insurance companies under review whereas human capital and relational capital had statistically significant impacts on the return on assets of the companies under review. The above result is in line with a priori expectation that intellectual capital will positively affect the ROA of insurance firms.

From the result displayed above, the probabilities connected with model  $x_2$  is higher than the specified level of significance, that is,  $P(x_2=0.495>0.05)$ . Therefore null hypothesis is accepted for model  $x_2$  which represents structural capital while null hypothesis for models  $x_1$ ,  $P(x_1=0.014<0.05)$  and  $x_3$ ,  $P(x_3=0.021<0.05)$  with lower P values than the stipulated level is rejected. The combined effect of the independent variables on ROA was however significant at  $(F=.015<0.05)$ . This implies that Research question is answered and its objective has been achieved. The  $R^2(.513)$  which is a measure of good-fit shows the rate of change in the Return on Assets which was accounted for by insurance firms' ability to effectively apply human, structural and relational capital in their operations. This result indicates that a change in the firms' application of intellectual capital accounted for only 51.3% of the change in the return on assets by the insurance companies under review. The slope coefficients of the B values of 0.008, 0.009 and 0.010 respectively from Table 4.1 for human capital, structural capital and relational capital when substituted for the original equation models of  $\alpha$ ,  $\beta_1$ ,  $\beta_2$  and  $\beta_3$  will give the following equations:  $Y = -.139+0.008$  (human capital) + 0.009 (structural capital) + 0.010 (relational capital) +  $\mu$ . The result of table 4.1 also show that relational capital had a statistically significant impact at  $P=.021<0.05$ . This result shows that relational capital has the capacity to increase the ROA of firms. Soumet (2007) affirms that a firm must exhibit a high sense of salesmanship and marketability with its sales team so as to positively impact on the financial performance of a firm. This same view was also confirmed through the works of Bataineh and Zoabi (2011).

### Discussions

Primary data result indicated that human capital and relational capital had statistically insignificant effects on return on assets of the firms whereas structural capital had a significant effect on ROA. The null hypothesis was therefore accepted in respect of human capital and relational capital. The same null hypothesis was rejected in respect of structural capital because the effect was statistically significant on return on assets. Aggregate effect of HC, SC and RC was significant at  $(F=.000<.05)$ . The hypothesis was rejected on this model. This position was in line with a study carried out by Soumet (2007); Namvar, Fathian, Gholamin and Akhavan (2011). Their conclusion was that structural capital as a management method had the capacity to achieve corporate goals or positive financial performance.

In another study on the effect of intellectual capital on organizational competitive advantage in Jordanian commercial banks in the Irbid district of Jordan carried out by Bataineh and Zoabi (2011) they further confirmed that there was a strong

significant and positive influence between structural capital and the competitive advantage of the organisations.

The secondary data analysis had a reverse effect on the relationship between the dependent and independent variables. Whereas human capital and relational capital had statistically significant effects on the return on assets, structural capital had statistically insignificant effect on return on assets. The null hypothesis was therefore rejected in respect of human capital and relational capital, and accepted in respect of structural capital. The f-statistic was significant at ( $F=.015 < .05$ ) as a result of the combined effect of the independent variables. The hypothesis was also rejected in this respect.

This result showed that relational capital had the capacity to increase the financial performance of firms. Soumet (2007); Bataineh and Zoabi (2011) affirm that firms must exhibit a high sense of salesmanship and marketability with its sales team so as to positively impact on the financial performance of a firm.

### **Conclusion and Recommendation**

The study concludes that intellectual capital can be captured as an asset in the financial statements of insurance companies in Nigeria using intellectual capital navigator of HC, SC and RC. This is because, the combination of these three variables has shown to enhance ROA of the insurance firms studied but SC has more effects on ROA in the insurance firms in Nigeria.

It is strongly recommended that insurance companies in Nigeria should endeavour to fully incorporate intellectual capital as non-current assets in their financial statement and annual report.

## References

- Alaka, N.S., Tijani, A.A., and Abass, O.A. (2011). Impact of strategic planning on the performance of insurance companies in Nigeria. *European Journal of Humanities and Social Sciences*.5(1).
- Anuonye, N.B. (2014). *Intellectual capital and financial performance of quoted insurance firms in Nigeria (2007-2011)*, (Doctoral dissertation). Babcock University, Ilisan, Nigeria.
- Appuhami, B.A.R. (2007). The impact of intellectual capital on investors' capital gains on shares: An empirical investigation of Thai Banking, Finance & Insurance Sector. *International Management Review*, 3 (2), 14-25.
- Baldini M.A, G. Liberator, T. Ridi (2011). Brand transaction announcements and stock price volatility. *Journal of Intellectual Capital*.12(3), 2. Retrieved from [www.emeraldpublishing](http://www.emeraldpublishing).
- Bataineh, M., & Al Zoabi, M. (2011).The effect of intellectual capital on organisational competitive advantage: Jordanian commercial banks (Irbid District): An empirical study. *International Bulletin of Business Administration*,(10), 15-17. Retrieved from [www.eurojournals.co](http://www.eurojournals.co)
- Bontis, N. (2004). National intellectual capital index: A United Nations initiative for the Arab region. *Journal of Intellectual Capital*, 5(1), 13-39.
- Chiucchi, M.S. (2013). Intellectual capital accounting in action: Enhancing learning through interventionist research. *Journal of Intellectual Capital*,14(1), 48-68.
- dePablos, P. (2003). Intellectual capital reporting in Spain: A comparative view. *Journal of Intellectual Capital*, 4 (1), 61-81.
- Edvinsson, L., & Malone, M.S. (1997).*Intellectual Capital: realising your company's true valueby finding its hidden brainpower*. New York, USA. Harper Business Inc.
- Epetimehin, F.M., and Ekundayo, O. (2011). Organisational knowledge management: Survival strategy for Nigeria insurance industry.*Journal of Management and Corporate Governance*,3, 53-64, retrieved from [www.centresinpub.org](http://www.centresinpub.org)
- Flamholtz, E.G. (1999). Current issues, recent advancements and future directions in human resource accounting. *Journal of Human Resource Costing & Accounting*, 4 (1), 11-25.
- Iswati, S., and Anshori, M. (2007).*The influence of intellectual capital to financial performance at insurance companies in Jakarta Stock Exchange*

- (JSE). Proceedings of the 13<sup>th</sup> Asia Pacific Management Conference, Melbourne, Australia.
- Moslehi, A., Mohaghar, A., Badie, K. and Lucas, C. (2006). Introducing a toolbox for IC measurement in the Iran insurance industry. *The Electronic Journal of Knowledge Management*, 4(2), 169-180.
- Namvar, M., Fathian, M, Gholamin, M.R., and Akhavan, P. (2011). *Exploring the role of human capital on firm's structural capital in Iranian e-business industry*. 3rd International Conference on Information and Financial Engineering, IPEDR vol. 12 (2011) IACSI Press, Singapore.
- Onafalajo, A.K, Eke, P.O. and Akinlabi, B.H. (2011). Impact of international finance reporting standards on insurance management in Nigeria. *Euro-Journals Publishing, Inc.* 12, 128-142.
- Ong, T.S., Yeoh, L.Y., and The, B.H. (2011). Intellectual capital efficiency in Malaysian food & beverage industry. *International Journal of Business and Behavioural Sciences*, 1(1), 16-31.
- Pandey, I.M. (2010). *Financial Management*, (10<sup>th</sup> edition). Retrieved from <http://www.flipkart.com/financial-management-10th/p/itmodytktxhkmh4dc>
- Pulic, A. (2004). Intellectual capital-does it create or destroy value? *Measuring Business Excellence*, 8(1), 62-68.
- Roos, G. & Roos, J. (1997). Measuring your company's intellectual performance. *Long Range Planning*, 30(3):413-426.
- Rowbottom, N. (1998). *Intangible asset accounting and accounting policy selection in the football industry* (Doctoral dissertation). University of Birmigham, U.K.
- Singh M. (2009). Human resource accounting: Challenge for accountants. *International Research Journal*, 2(5), 440-442.
- Soumet, D.(2007, June). *Intellectual Capital Statement*. Technical paper on Zone Industrielle Nord, VMI 86507 MONTAIGU.
- Tongo, C.I. (2010). Accounting for intellectual capital: A 21<sup>st</sup> century responsibility for Strategic Managers. *Journal of Management Systems*, 22 (1), 39-51.
- Uadiale, O.M., and Uwuigbe, U. (2011). Intellectual capital and business performance: Evidence from Nigeria. *Interdisciplinary Journal of Research in Business* 1(10), 49-56.

- Verguwen, P.G., and Alem, F.J.(2005). Annual report of IC disclosures in the Netherlands, France and Germany. *Journal of Intellectual Capital*, 6(1), 80-104.
- Wang, Y., and Xu, Q.R. (2002). Intellectual capital and its measurement. *Resources Development Management*, 14, 11-16.
- Yahaya, K.A. (2006). Impact of investment in human resource training and development on employee effectiveness in Nigerian banks. *Journal of Social & Management Studies*, 12, 186-197.
- Yuan, Q.H. (2001). *Corporate intellectual capital management*, Beijing. Economic and Management Publishing House.
- Zou X., and Huan T.C (2011). A study of the intellectual capital's impact on listed banks' performance in China. *African Journal of Business Management*, 5(12), 5001-5009.