

# Evaluating the Effect of Intangible Assets on Economic Value Added of Selected Manufacturing Firms in Nigeria

Nnado Ifeanyi C.\* Ozouli Caroline N.

Department of Accountancy, Enugu State University of Science and Technology, Enugu, Nigeria

## Abstract

This study tries to ascertain the impact of total intangible assets on the financial performance of manufacturing firms publicly listed on the Nigerian Stock Exchange (NSE). Intangible assets are not accorded the same relevance as tangible assets. Studies has proven that total intangible assets including human capital is the reason behind the survival of 'firm A' in this era of persistent economic recession and liquidity squeeze in lieu of 'firm B' that submerged albeit in the same industry and sub-sector. In Nigeria, the value of total intangible assets (less than 1%) for all the manufacturing firms studied results from the volatility of this asset. The study made use of secondary data collected and collated from 46 manufacturing firms audited annual reports. Both descriptive and inferential statistics were employed in data analysis. In particular, Prais Winsten Regression Correlated Panels Corrected Standard Errors (PCSEs) is used to test the relationship between the variables given that panel (cross-sectional and time series) data are used for the study. Findings indicate the existence of a strong negative relationship between EVA and IA as  $P = 0.011 < 0.05$  significant level. The systematic variation is explained by 55.13% coefficient of determination ( $R^2$ ) which is above average and significant for panel data. In addition, there is a significant negative relation between EVA and LnTA at  $P = 0.026$ . Conversely, there is perfect positive relationship between EVA and ROA at  $P = 0.000$ . These results explain the behavior of firms in minimizing the value of intangible assets given that the relationship between intangible assets and financial performance proxied by EVA is very significant and negative.

**Key words:** Economic Value Added, Intangible assets, Firm Value, Manufacturing Firms

## 1. Introduction

### 1.1 Background of the Study

Value is the key measuring instrument in an economy that is market-based (Koller, Goedhart & Wessels (2010). The transition from an industrial-based economy towards the market-based economy has confronted experts / researchers, business professionals and investors. It led to the review of most firms' asset valuation methods. According to Baruch (2011), one important feature of the new economy (market-based) is that intangible factors are playing an increasingly dominant role in business wealth creation. The changing economic environment of the 1980s aligned to a large merger wave, thereby increasing the amount of goodwill on company's audited financial statements. As a result, the goodwill which is likely to be the excess price paid over the sum of identifiable net assets of the acquired company, gained increased attention with the growing importance of intangibles in company operations. He further stated that firms offer intangible products in the form of services to their customers. He assessed that in 2009, 63.4% of the global GDP was generated by the service sector, 30.6% and 6% by the industrial sector and agriculture respectively. This shows that intangible value creation represents a larger proportion of the economy than manufacturing and agriculture combined. Salinas (2009) opined that intangible assets are seen as drivers of wealth and growth today. According to the study, intangible assets represent at least 60% to 75% of capitalization value in the major stock indices.

The Financial Accounting Standard Board in the US and the International Accounting Standard Board in Europe drafted SFAS 141 and IFRS 3 respectively. Both regulations required firms to be more transparent in the reporting of intangible assets particularly in business combinations, but do not allow for the capitalization of internally generated intangibles. Companies are required to report the price paid for each single asset of the target firm with the use of a purchase price. The purchase price is divided into several components, namely; net working capital; fixed assets and intangible assets categorized into other intangibles and goodwill. While fixed assets are those assets that can be measured reliably like property, plant and equipment, other intangible assets are defined as identifiable non-monetary assets without physical substance (former SAS 31, IAS 38:8, IFRS 3.A), and Goodwill consists of future economic benefits arising from assets that are not capable of being individually identified and separately recognized (IAS 36, IFRS 3.A). This study is concerned with those intangibles that can

be identifiable and measurable using varied techniques. This is in agreement with the opinions of Epstein and Mirza (2005).

### *1.2 Statement of the Problem*

Though company resources are made up of physical capital, human capital, and organizational capital resources, only physical capital, that is, tangible assets are usually stated in the financial statement. In other words, human capital (training, experience, judgment, intelligence and relationships among company's staff) and organizational capital (internal framework, controlling and coordinating systems of the company, and informal relations) and their value relevance are neither explicitly nor implicitly reflected in the financial statements. Both represent two out of the three resources outlined above (Fernandez, Montes and Vasquez, 2000).

Amortization of 'goodwill' has serious shortcomings, hence, the emergence of IFRS 3, SFAS 141R and SFAS 142. That is, goodwill and other intangibles are made up of unrelated components: the new goodwill comprising of reputation (Iwu-Egwuonwu, 2011), human capital and organizational capital, have indefinite life albeit highly volatile and perishable. Conversely, patents, copyrights, licenses, trademarks and royalties have definite lives. To really ascertain if intangibles improve a firm's value and its profits, these components should be separately analyzed and their effects observed (Henning, Lewis and Shaw, 2000). Regrettably, only those components having definite legitimate lives can be quantitatively measured. Those components having indefinite lives that exert significant positive effect on firm value / growth are highly qualitative and not easily measured quantitatively. For instance, IFRS 3 suggests revaluation annually which is open to varied interpretations.

Further, the impairment test suggested by SFAS 141R and SFAS 142 has significantly reduced traditional goodwill to a fraction of its size (accounting goodwill, other identifiable intangibles, impairment, revalued fair value). There is the issue of goodwill increasing as a result of increased financial, organizational and operating synergies from an acquisition / merger that may not likely affect other intangibles. Several empirical studies suggest a positive correlation between firm value and intangibles (Henning, Lewis & Shaw, 2000; Vance, 2008). Some of these empirical studies including (Henning, Lewis & Shaw, 2000; Vance, 2008; Karjalainen, 2007; Iwu-Egwuonwu, 2011) were done in the so-called technologically advanced economies having entirely different scenarios / characteristics in relation to our 'developing' economy. It is either that developing economy is in dearth of old thriving indigenous companies or these companies are suffocated by the multi-national companies and persistent economic recession. That is, there is dearth of indigenous work based on our local setting. Further, this study is presumed to correlate evidence from developing economies overseas such as Brazil, Vietnam, and Chile. Succinctly, most of these studies are foreign based and results therefrom have not been tested in the Nigerian environment, hence, the need for this study.

### *1.3 Objective of the Study*

The main objective of this study is to assess the impact which total intangible assets have on profitability and firm value. Specifically the study tries to:

- Ascertain the relationship between total intangible assets as per IFRS 3, SFAS 141R and 142 and economic value added (EVA) of selected quoted manufacturing companies in Nigeria.
- Ascertain the relationship between total intangible assets and firm size of selected quoted manufacturing companies in Nigeria.

## **2. Literature Review**

### *2.1 Conceptual Review*

According to (IFRS 3.A) intangible assets can be defined as future economic benefits arising from assets that are not capable of being individually identified and separately recognized. Examples of intangible assets are assembled workforce, customer service capability, presence in geographic markets or location, non union status or strong labor relations, ongoing training or recruiting programs, outstanding credit rating, access to capital market, favorable government relations and synergies. Goodwill also includes different tax liabilities which are income taxes payable / receivable in the future resulting from timing differences between the accounting value of assets and liabilities and their tax value (IAS 12.5).

(IAS 38:8) stated that market value of a firm represent the value of a firm as the multiplication of its stock price with shares outstanding. It further stated that intangible assets are regarded as non physical assets, sum of other intangible assets and goodwill. Other intangible assets can be defined as identifiable non-monetary assets without physical substance. According to De-Lange (2010), other intangible assets include:

- Market-related intangible assets such as trademarks, trade name, trade dress, internet domain;

- Artistic-related intangible assets such as plays, operas, ballets, books, pictures;
- Customer-related intangible assets such as customer lists, order or production backlog, customer relationship;
- Technology-based intangible assets such as unpatented technology, computer software, data bases;
- Contract-based intangible assets such as licensing, royalties, broadcast rights.

The study avowed that traditional view on the risk return relationship is challenged by the emergence of intangible assets, because they are not physically present and therefore, it is more difficult to determine their risk-return characteristics. According to the study, the Resource-Based View (RBV) explains the special characteristics of intangible assets and why they are important for companies in order to gain a sustainable competitive advantage. Due to the surge in intangibles, regulations need to be updated. This is because of changes in the treatment of intangible assets and goodwill in business combinations. According to IFRS 3 (2009), purchased goodwill and intangibles are reported using the “fair value” method and should no longer be amortized because it is recognized that the value of goodwill and intangibles can be very volatile. Therefore, the IASB decided to implement a required annual impairment test to capture the unstable value depreciation of intangible assets.

## 2.2 Empirical Reviews

The objective of the accounting standards is to provide high quality, transparent and comparable information in financial statements and other financial reporting to help participants in the capital market worldwide in their economic decisions (IFRS, 2009). Henning, Lewis and Shaw (2000) carried out a study on “What impact book value of Tangible Assets, total liabilities, goodwill and other intangibles have on the market value of the firm”. The study attempted to discern the influence of such independent variables as book value, liabilities and different components of goodwill on the share price using US firms. They discovered that markets distinguish between the components of reported goodwill. Moreover, that investors distinguish among the different determinants of firm value like capital structure, company reputation, dividend policy and earnings (projected) growth. They concurred that intangible assets and goodwill contribute in delivering company value by allowing the firm to stand out from its competitors. That is, intangible assets increased significantly the pooled synergies of the merger.

Vance (2008) studied “The impact of Goodwill on Firm Value”. He tried to ascertain if reported goodwill has economic substance or whether it is merely bookkeeping device. He argued that if reported goodwill does reflect the real value of goodwill it should have an effect on company performance. His findings confirm that goodwill is related to company performance, although the impact of goodwill on company performance is not larger than the impact of non-goodwill assets. The result of Heiens, Leach and McGrath (2007) however, contradicted the results of Vance. Heiens et al (2007) compared holding returns of firms with positive investments in intangibles and firms with no investment in intangibles. They found a negative relationship between goodwill and performance. The authors consider that either the excess amount paid to acquire the assets was not viewed favorably by investor markets or that the excess amount paid did not contribute to the benefit of the firm as anticipated. However, intangible assets other than goodwill show a significant positive relationship with holding period returns. When comparing the outcomes of both firm samples, the holding period returns of both samples are negative. However, the holding period returns for firms without investments in intangibles are more negative than for firms which did invest in intangibles. This indicates that intangible assets significantly contribute to higher holding-period returns. Hence, investing in intangible assets is in fact valuable and negligence of intangibles will destroy value.

Karjalainen (2007) investigated valuation of intangible assets in different financial environments. The study consists of four essays and an introductory section. Each essay had different things to investigate e.g. essay one investigated the firm’s investments in human capital in different legal and financial environments. The findings of those four essays show that the firm’s current R&D investments are more strongly associated with the level of future firm profitability in bank-based than market-based financial system whereas current R&D investments are more strongly associated with the uncertainty of future firm profitability in market-based than bank-based financial system. In a study carried out by Iwu-Egwuonwu (2011) on Corporate Reputation and Firm Performance, he adopted the library desk technique in reviewing studies in areas of corporate reputation. The study tried to establish if a market value premium is related (directly proportional) to reputation and by extension, derivable from superior financial performance. He deductively noted that firms with high reputation are more profitable in that they possess much lower standard deviation in sales and net income, and less prone to bankruptcy and other business hazards. He suggested that for going concern companies to attain perpetual

growth, their board of directors, chief executive officers and managers should propagate those activities that tend to enhance the reputation of their respective firms. This is because reputation is perishable and very difficult to recover once lost (Sony Corporation, IBM).

Izedonme, Odeyle and Kuegbe (2013) examined the relationship between human resource accounting and organizational performance among publicly listed firms in Nigeria. In addition, the study looked into the relationship between intangible assets and organizational performance. Data employed were cross-sectional panel data. Return on Capital Employed (ROCE) proxied for organizational performance. Multiple regressions were used to determine the relationship between the variables. The study showed an insignificant relationship between the predictor variables (human resource accounting, intangible assets) and organizational performance. Li and Wang (2014) explored the influence of intangible assets on profitability of publicly listed firms in the information and communication technology (ICT) sector of Hong Kong. The study used research and development cost, employee benefit expense and sale training expense as predictor variables and return on assets (ROA) as proxy for Profitability. The study employed panel data methodology. In other words, multiple regressions, specifically, pooled ordinary least square and random effect were adopted in analyzing the relationship between the predictor variables and ROA. The results depicted a positive relationship between the independent variables (research and development cost and sale training expense) and ROA.

### *2.3 Theoretical Framework*

This study was based on Traditional Finance Theory: Efficient Market Hypothesis. It stated that two contesting views exist about the stock market and the new economy. One view argues that intangible assets help explain why companies market values are greater than their book values. The opposing view argues that valuations have become detached from company fundamentals resulting in an overvaluation of companies' stock. The Efficient Market Hypothesis (EMH) is applicable to the intangible assets debate in the way that the EMH assumes that the stock market equates the company's market value to its fundamental value, defined as the expected present value of future payments to shareholders (Brooks, 2008).

Fama (1991) stated that the efficient market hypothesis entails that security prices reflect all available information. He also identified three forms of market efficiency (i) weak form; based on available information of historical price data, (ii) semi-strong form; based on publicly available data and (iii) strong form; based on private, insider information, since intangible information is not reported in public financial statements, except for purchased intangibles, all internally generated intangibles are part of private information.

According to Lev and Zarowin (1999) several researchers argue that the informativeness of the firm's fundamentals represented in its financial statements are reduced. Hence, the assumption that the capital market is semi-strong form efficient can explain the sharp increase in stock prices in the new economy by the supposed increase in intangible capital. Ross, Westerfield & Jaffe (2005) stated that the capital asset pricing model (CAPM), which assumes strong form efficient capital markets align to this work in that it facilitates explaining the risk-return relationship of assets. They stated that the expected return on a certain security is a combination of the risk-free rate, the volatility of a security's return and the covariance and correlation with the market portfolio. The CAPM assumes that investors require an additional return resulting from the riskiness of a security. Because of high degree of uncertainty associated to future expected benefits from intangibles, companies investing heavily in intangible assets are considered riskier. Therefore, investors require a higher return on the securities of intangibles-intensive companies. Consequently, intangible-intensive firms are expected to produce higher market returns than tangible-intensive firms.

The relevance of the theory on Traditional Finance need not be over-emphasized. This is because it helps to explain why company's market values are greater than their book values. It explains the assumptions of Capital Asset Pricing Model which states that investors require an additional return resulting from the riskiness of a security. Although the traditional view is challenged by the emergence of intangible assets because they are not physically present and therefore it is more difficult to determine their risk-return characteristics. The resource based view in turn explains the special characteristics of intangible assets and why they are important for companies in order to gain a sustainable competitive advantage. The new standards affording goodwill an indefinite life in contrast to other intangibles conform to the semi strong form of the EMH theory as financial, operation and organizational synergies grow in perpetuity given that new ideas/strategies are inherited via M&A deals and stale ideas expunged simultaneously. In addition, sound recruitment and retraining procedures ensures continual influx of positive synergies.

Salina (2009), posited that intangible assets play an important role in the determination of profitability and firm value. In the last two decades, research on the resources of sustained competitive advantage and the

determinants of firm value highlighted the value relevance of intangibles. He, further, stated that intangible assets are still largely disregarded by policy makers in setting accounting standards. The characteristics of intangible assets, however, do not fit the traditional definition of an asset which hinders a solid valuation and reporting of intangibles. Events such as the downfall of Enron, WorldCom, Intercontinental bank Plc, Oceanic bank Plc, Bank PHB Plc show the increased risk, uncertainty and volatility associated with intangible assets, whereas the emergence of service firms shows the increased opportunities of intangible assets. Applying traditional finance theory to the characteristics of intangibles would result in the conclusion that intangible assets should yield higher returns because of the increased risk potential.

### 3. Methodology and Description of Variables

The model below has the ability to reliably measure the impact of intangible assets on financial performance of quoted firms in the manufacturing sector which is crucial to their recognition in financial reporting using secondary data collected and collated from 46 manufacturing firms audited annual reports. These firms must be publicly listed in the Nigerian Stock Exchange. In particular, Prais Winsten Regression Correlated Panels Corrected Standard Errors (PCSEs) is used to test the relationship between the variables given that panel (cross-sectional and time series) data are used for the study. In order to ascertain if the application of total goodwill have impact on the real value of the firm, a model is developed thus:

$$EVA_{it} = \beta_0 + \beta_1 IA_{it} + \beta_2 ROA_{it} + \beta_3 LnTA_{it} + \beta_4 SG_{it} + \epsilon_{it}$$

Where  $EVA_{it} = EBIT * (1 - Tax Rate) - (Net Debt + Equity) * WACC$

Economic Value Added, the dependent variable, is used to capture the value added by all components making up the firm *i* at time *t* in the model. WACC denotes weighted average cost of capital which is average for the sampled firms at 17.5% and Tax Rate is synonymous with corporation tax averaged at 30%.

$IA_{it}$  = the Book Value of total intangible assets per financial statement as stated in the audited annual reports

$ROA_{it} = \frac{[Net\ income + Interest\ Expense * (1 - Tax\ Rate)]}{(Total\ Assets - Equity\ Interests)}$

$LnTA_{it}$  = Natural Logarithm of Total Assets

Natural Logarithm of Total Assets (LnTA): This is used as proxy for firm size. It is most preferred as it is easier for firms to inflate their total sales than their total assets. While total assets is used to deflate most of the variables in the study to make these linear, natural logarithm of Total Assets linearizes the value of the total assets. Natural log being the inverse of the exponential is all about time and growth of a variable.

$SG_{it} = Sales\ Growth = \frac{(Sales_t - Sales_{t-1})}{Sales_{t-1}}$

*Sales Growth*: It connotes the positive difference between sales in the current period ( $Sales_t$ ) compared to a previous corresponding period ( $Sales_{t-1}$ ). This difference is divided by total sales in the preceding period.

$\epsilon_{it}$  = the error term including noise in the sample which can be attributed to industry as a whole and / or firm specific information, the business environment and other features.

$\beta_0, \beta_1, \beta_2, \beta_3$  and  $\beta_4$  = constants and coefficients.

### 4. Results

To ascertain the reliability and adequacy of the model employed in the study necessitates testing for stationarity of the variables (confirmed at lag 1), for heteroskedasticity (which is positive and corrected using standard robust errors, see table 4.2 below) and for multicollinearity (that is negative at mean VIF of 1.07, see table 4.3 below). Meanwhile, table 4.1 depicts the statistical description of the variables using measures of central tendency (mean) and dispersion (standard deviation, minimum and maximum values). The large standard deviations (see EVA and SG) are attributed to the sampled firms emerging from the diverse 95 sub-sectors of the Nigerian Stock Exchange (NSE).

Table 4.1 Summary Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
eva	498	.130361	.9226367	-7.1577	8.2141
ia	498	.0023388	.0011225	.0011	.0046
roa	498	.2518167	.6435849	-1.0963	7.8495
lnta	498	15.6584	2.37322	.0008	20.6937
sg	498	.3271034	3.112668	-7.0825	67.8623

Authors' STATA 11.2 Output of Collated Data

Table 4.2 Pairwise Correlations

	eva	ia	roa	lnta	sg
eva	1.0000				
ia	-0.1194 0.0077	1.0000			
roa	0.6510 0.0000	-0.0557 0.2148	1.0000		
lnta	-0.3551 0.0000	0.1304 0.0035	-0.3254 0.0000	1.0000	
sg	0.0095 0.8323	-0.0302 0.5008	-0.0105 0.8149	-0.0541 0.2282	1.0000

Table 4.3 Heteroskedasticity Test

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity  
 Ho: Constant variance  
 Variables: fitted values of eva  
  
 chi2(1) = 3697.98  
 Prob > chi2 = 0.0000

Table 4.4 Multicollinearity Test

Variable	VIF	1/VIF
lnta	1.11	0.878512
roa	1.12	0.893099
ia	1.02	0.982232
sg	1.00	0.995622
Mean VIF	1.07	



Table 4.5 Panel Regression

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Prais Winsten regression, correlated panels corrected standard errors (PCSEs)

Group variable:  firm                Number of obs   =    498
Time variable:  year                Number of groups =    46
Panels:         correlated (unbalanced)  Ubs per group: min =    3
Autocorrelation: panel-specific AR(1)   avg = 10.82609
Sigma computed by casewise selection     max =    12
Estimated covariances =    1081        R-squared       =    0.5513
Estimated autocorrelations =    46      Wald chi2(4)    =    20.94
Estimated coefficients =    5           Prob > chi2     =    0.0003
    
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eva	Panel-corrected		z	P >  z	[95% Conf. Interval]	
	Coef.	Std. Err.				
ia	04.24526	22.2764	2.53	0.011	149.4665	19.02542
roa	.7949254	.2158186	3.68	0.000	.3719286	1.217922
lna	-.1327982	.0596502	-2.23	0.026	-.2497105	-.0158859
sg	-.0039543	.0054747	-0.72	0.470	-.0146846	.0067759
_cons	2.266051	.8986088	2.52	0.012	.5048105	4.027292

rhos = .5932134 .6315653 .1465693 .2631516 .8647465 ... .5216288

Durbin-Watson statistic (original) = 1.885602 Durbin-Watson statistic (transformed) = 1.895575

Tables 4.1- 4.5 are reproduced from the Authors' STATA 11.2 Output of Collated Data

Table 4.2 shows the significant negative association between the regressand, EVA and IA at P-value = 0.008, perfect negative correlation between EVA and LnTA and perfect positive correlation between EVA and ROA. The result is further, strengthened by the regression analysis. That is, there is a strong negative relationship between EVA and IA given that  $P = 0.011 < 0.05$  significant level. The systematic variation is explained by 55.13% coefficient of determination ( $R^2$ ) which is above average and significant for panel data. In addition, there is perfect positive relationship between EVA and ROA at  $P = 0.000$  and significant negative relation between EVA and LnTA at  $P = 0.026$ .

## 5. Conclusion and Recommendations

Intangible assets are not accorded the same relevance as tangible assets. Studies has proven that total intangible assets including human capital is the reason behind the survival of firm A in this era of persistent economic recession in lieu of firm B that submerged albeit in the same industry and sub-sector. In Nigeria, the value of total intangible assets (less than 1%) for all the manufacturing firms studied results from the volatility of this asset. This is so as the relationship between intangible assets and financial performance proxied by EVA is very significant and negative. However, It is important for managers not to neglect the impact of intangible assets, since reported intangible assets shape investor's perception of company value. This is because, in the context of a business combination, the acquiring firm can take into consideration the impact goodwill and other intangible assets have on companies in their industry to meet investor preferences.

The policy makers are advised to still improve the informativeness of intangibles by developing an accounting standard for including internally generated intangible assets. There is also the need for policy makers to set up guidelines for the identification, measurement, classification and reporting of intangible assets. A better reporting framework for intangible assets may contribute to improved decision-making of investors. The FRS 31 (Intangible Assets) and FRS 26 (Business Combinations) should be revisited to be in harmony with the equivalent SFAS 141R, SFAS 142 and IFRS 3.

## References

- Baruch, L. (2011). *Intangibles: Management, Measurement, and Reporting*. (5<sup>th</sup> ed.). Washington: The Brookings Institution.
- Begley, J., Chamberlain, S. L. & Li, Y. (2006). Modeling goodwill for banks: A residual income approach with

- empirical test. *Contemporary Accounting Research*, 23(1), 206-258.
- Brooks, C. (2008). *Introductory Econometrics for Finance (2<sup>nd</sup> ed.)*. London: Cambridge University Press.
- Bruner, R. F. (2005). *M&A Lessons that Rise Above the Ashes: Deals from Hell..* New Jersey: John Wiley & Sons, Ltd.
- Campa, J. M. & Hernando, I. (2006). M&A performance in the European financial industry. *Journal of Banking and Finance*, 30(12), 3367-3392.
- Chauvin, K.W. & Hirschey, M. (1994). Goodwill, profitability, and the market value of the firm. *Journal of Accounting & Public Policy*, 13(2), 159-180.
- Daniel, K & Titman, S. (2005). Market reactions to tangible and intangible information. *The Journal of Finance*, 61, 1605-1643.
- De-Lange, F. (2010). *Financial Reporting Valuations: Purchase Price Allocations*. Retrieved on 13 March 2016 from: <http://www.amsterdam.edu/facultyandresearch/docs/ACCT017.pdf>
- Epstein, B. and Mirza, A. (2005) *IAS 2005: Interpretation and Application of International Accounting and Financial Reporting Standards*, New Jersey: Wiley Hoboken.
- Fama, E. F. (1991). Efficient capital markets II. *The Journal of Finance*, 46(5), 1575-1617.
- Fernandez, E., Montes, J. M. & Vasquez, C. J. (2000) Typology and strategic analysis of intangible resources, *Technovation*, 20(2), 81-92.
- Financial Accounting Standards Board. (2001). *Statement of Financial Accounting Standards 142: Goodwill and other Intangible Assets*, FASB, Washington DC.
- Financial Accounting Standards Board (2007). *Statement of Financial Accounting Standards 141: Business Combinations (Revised)*, FASB, Washington DC.
- Heiens, R. A., Leach, R. T. & McGrath, L. C. (2007). The contribution of intangible assets and expenditures to shareholder value. *Journal of Strategic Marketing*, 15, 149-159
- Henning, S. L., Lewis B. I. & Shaw, W. H. (2000). Valuation of the components of purchased goodwill. *Journal of Accounting Research*, 39(2), 375-386.
- International Accounting Standards Board (2009). *International Financial Reporting Standards (IFRS)*.
- Iwu-Egwuonwu, R. C. (2011). Corporate reputation and firm performance: Empirical literature evidence, *International Journal of Business and Management*, 6(4), 197-206.
- Izedonme, P. F., Odeyile, L. G. & Kuegbe, K. (2013). Human resource accounting and its impact on organizational performance. *Journal of Economics and Sustainable Development*, 4(15), 50-56.
- Jennings, R., Robinson, J., Thompson II, R. B. & Duvail, L. (1996). The relation between accounting goodwill, numbers and equity values. *Journal of Business, Finance and Accounting*, 23(4), 513-533.
- Karjalainen, P. (2007). Valuation of intangible assets in different financial environments. *Journal of Accounting and Finance*, 6(2), 254-267
- Koller, T., Goedhart, M. & Wessels, D. (2010). *Valuation: Measuring and Managing the Value of Companies (5<sup>th</sup> Ed.)* New Jersey: John Wiley & Sons, Inc.
- Lev, B. (2002). Where have all of Enron's intangibles gone? *Journal of Accounting and Public Policy*, 21, 131-135.
- Lev, B. & Zarowin, P. (1999). The boundaries of financial reporting and how to extend them. *Journal of Accounting Research*, 37(2), 353-385.
- McCarthy, M. G. & Scheider, D. K. (1995). Market perception of goodwill: Some empirical evidence. *Journal of Accounting and Business Research*, 26(1), 69-81.
- Ross, S. A., Westerfield, R. W. & Jaffe, J. (2005). *Corporate Finance (7<sup>th</sup> ed.)*. New York: McGraw Hill.
- Salinas, G. (2011). *The International Brand Valuation Manual (1<sup>st</sup> ed)*. UK: John Wiley & Sons, Ltd.
- Vance, D. E. (2008). *Return on Booked Goodwill*. Northeastern Association of Business, Economics, and Technology Proceedings.