INTERNATIONAL JOURNAL OF SOCIAL SCIENCES AND HUMANITY STUDIES
Vol 9, No 1, 2017 ISSN: 1309-8063 (Online)

A COMPARISON OF THE CAPITAL STRUCTURES OF THE TOP 40 MULTINATIONAL ENTITIES AND THE TOP 40 JSE-LISTED ENTITIES

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─Abstract ─

The strategies and policies of multinational entities (MNEs) centre on the focal goal of any company, which is to maximise profits and shareholder wealth. Management aims for an optimum ownership structure by implementing various strategies. One of these strategies is the debt-to-equity ratio (the capital structure). Previous studies conducted on various countries' locally-listed entities confirm that the capital structure of an entity has an impact on the value of that entity. This then raises an interesting question as to whether the capital structures of the top 40 Johannesburg Stock Exchange (JSE)-listed entities are similar to those of the top 40 global MNEs. Based on market capitalisation on 31 December 2014, this study sought to compare the capital structures, using the debt-to-equity ratio, of the top 40 JSE-listed entities with those of the top 40 global MNEs on the Fortune 500 list. Independent t-tests were performed on the debt-to-equity ratios of the top 40 JSE-listed entities and the top 40 global MNEs as a group. Both independent t-tests and the Mann-Whitney tests were performed on the debt-to-equity ratios of applicable entities of the group divided into three selected industries. The results of the independent t-test indicate a statistical and practically significant difference between the top 40 JSE-listed entities and the top 40 global MNEs' capital structures. The results of the Mann-Whitney tests indicate that if the financial industry is excluded, there is no statistical or practically significant difference between the capital structures of the top 40 JSE-listed entities and the top 40 MNEs. However, based on the effect size there is a practical visible difference.

Key Words: *Top 40 multinational entities/companies/groups/transnational companies, Capital structures, Shareholder wealth*.

JEL Classification: G32

1. INTRODUCTION

1.1. Globalisation and multinational entities

Globalisation has created unity among countries and has eliminated trading boundaries thereby enabling entities to trade cross-border and venture into new markets (Saunders, 2016). Entities that are able to conduct trading activities in more than one country are known as multinational entities (MNEs) (Fernandez, 2002; Randeberg, 2014), transnational companies or multinational corporations. A seminal approach indicate that MNEs have a parent corporation in the home country and affiliates, in the form of branches or subsidiaries in host countries and, in rare circumstances, may take the form of a non-corporate entity (Kopits, 1976; Ghoshal & Barlett, 1990; Dunning & Sarianna, 2008). All activities undertaken by the MNE group are subject to the control of the parent company; that is, they are undertaken within a framework of group policies and strategies that are set by the group as a whole (Eden, 1998; OECD, 2013). As such, the separate legal entities that make up the group operate as a single integrated enterprise following an overall business strategy (OECD, 2013).

Researchers, such as Madura (2011) and Cristea and Nguyen (2013), argue that the focal group strategy is to maximise profits and shareholder wealth. In order to reach this goal, various strategies have to be implemented to obtain the optimum ownership structure (Anggraeni, 2015). Researchers argue that since capital is the foundation upon which an entity operates, the debt-to-equity ratio influences the value of such an entity (Edim, Atseye & Eke, 2014).

2. LITERATURE REVIEW

Findings by Duan, bin Chik and Malaysia (2012) indicate that capital structures determine structures of debt and equity, and that the analysis of the debt structure is of great importance to maximising the value of an entity. Ogbulu and Emeni (2012) analysed the debt structures of various entities and found that long-term debt was the major determinant of an entity's value. A theoretical overview, by Edim *et al.* (2014), shows that the ratio (capital structure) chosen by the financial managers will be predominantly for the purpose of enhancing the entity's value.

The findings of Anton (2016) support the view that the financial leverage (capital structure) of an entity influences its growth and value. Lynch (2009) posits that the capital structure of an entity may also be referred to as its financing structure. In order to determine the degree to which an entity finances its assets through debt

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or equity; that is, its financial leverage (OECD, 2014), the debt-to-equity ratio may be applied. The debt-to-equity ratio can be expressed in the following formula:

Formula 1: Debt to equity

Debt to equity = (Total debt/Total equity) x 100 = x%

Source: Correia, Flynn, Uliana & Wormald (2015)

The distinction between debt and equity is important for transaction classification by entities, and has been the topic of discussion in various court cases in the United States. However, discussions of this nature are limited in South African court cases. Unanimous descriptions used by the courts are that debt has a fixed maturity date (PepsiCo v CIR, 2012), a fixed interest rate (Pritired I LLC v United States, 2011) and that there is a right to enforce repayment of interest and capital (Hewlett-Packard Co. v CIR, 2012). Debt creates an unconditional obligation to repay advances, irrespective of the availability of accumulated earnings or the risks to the company (Harmse, 2014).

In contrast to the characteristics of debt, unanimous descriptions used by the courts are that equity has no maturity date (Pritired I LLC v United States, 2011), no fixed obligation or enforcement provisions to repay interest and capital (PepsiCo v CIR, 2012) and that claims are subordinated to the claims of other creditors or investors (Hewlett-Packard Co. v CIR, 2012). Therefore, equity is tied to the well-being of the business (PepsiCo v CIR, 2012) and the funds are exposed to the risk of the business (Shedd v CIR, 2000). In Hewlett-Packard v CIR (2012) it was explained that participation in management may compensate for the increased exposure to risk.

Jay (2003) posits that debt finance is usually cheaper than equity finance because interest has to be paid before dividends, resulting in debt finance being safer from the lender's point of view. Debt interest is also usually tax deductible and arrangement costs are lower than for equity finance. However, the company is exposed to more risk due to repayments that have to be made irrespective of the company's ability to pay (Jay, 2003).

The literature study reflects that the capital structure of an entity has an influence on the value of the entity. Since the capital structure consists of debt and equity, the debt-to-equity ratio is used in these studies to determine the impact of this on the entity's value. In this study, the fact that the MNEs have reached their

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optimum value is already known - what is unknown, is whether this contributes to similar debt-to-equity ratios (capital structures).

3. METHODOLOGY

A literature review of capital structures of MNEs was undertaken to determine the difference between equity and debt. A quantitative research approach was used in order to determine whether the capital structures implemented by the top 40 JSE-listed entities' managers and the top 40 global MNEs' managers are similar.

For the study, a document analysis involving a process of analysing the content of documents to collect data (Saunders, 2016) was carried out. A document analysis is the analysis of qualitative data using a quantitative approach (Welman, Kruger & Mitchell, 2005). This method of data analysis has been successfully used by several researchers, including Swart, Swanepoel and Surujal (2014) and Saunders (2016). It helps the researcher to gather background information to understand the phenomenon under investigation. Furthermore, it provides the information to generate data for the research study and enables the researcher to perform a systematic evaluation of the data (Bowen, 2009). Gray (2009) explains that the researcher should establish whether primary or secondary sources are to be used, and that secondary data can be retrieved from the Internet since it is available to the public.

The target population for this study, namely the top 40 JSE-listed entities and the top 40 global MNEs, was selected based on market capitalisation on 31 December 2014. The listing date was selected because research on the topic commenced in 2015. The entities on the JSE-list were all still listed in 2017. The selection of the sample was not based on random selection, but rather on availability and convenience, since the data were easily accessible for the researcher (Saunders, 2016). Based on market capitalisation, the top 40 JSE-listed entities and the top 40 MNEs (according to the Fortune 500) were selected, making this a judgement or purposive sample. Inspection of the entities confirmed that all the entities were MNEs; therefore, a cross-check was performed to ensure that none of the top 40 JSE-listed companies were also on the list of the top 40 global MNEs. The cross-check confirmed that there were no duplicate entities.

Once the sample was selected, McGregor BFA (2017) was used to extract the debt-to-equity ratios of the top 40 JSE-listed entities. The consolidated annual financial statements of each of the top 40 global MNEs were inspected and the results calculated, based on Formula 1, using the total liabilities and total equity on the consolidated statements of financial positions.

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The data were captured on an Excel spreadsheet and analysed using the Statistical Package for the Social Sciences (SPSS – Version 23). A descriptive analysis was used to describe the sample compilation. The descriptive analysis enables the researcher to categorise patterns and to describe trends that emerges from the data (Laerd, 2015).

An independent t-test was performed in order to determine whether there was a statistical significant difference between the mean scores of the top 40 JSE-listed entities and the top 40 global MNEs and the mean scores of the global MNEs and the JSE-listed entities in the three industry categories. A p-value of <0.05 would be indicative of a statistically significant difference (Pallant, 2013). The effect size is the "*magnitude of the difference between groups"* (Sullivan, 2012). The p-value indicates the statistical significant difference and the effect size, the practical significant difference (Sullivan, 2012). An effect size of ±0.2 indicates no practically significant difference; ±0.5 indicates a practically visible difference and ±0.8 indicates a practically significant difference (Cohen, 1988).

A Mann-Whitney test had to be performed on the means of the global MNEs and the JSE-listed entities in the three industry categories, since the population was not normally distributed (Laerd, 2017) and the sample size was <20. The interpretation of the p-value for the Mann-Whitney test and the independent t-test is similar. For purposes of the interpretation of the effect size of the Mann-Whitney test, ±0.1 indicates no practically significant difference; ±0.3 indicates a practically visible difference and ± 0.5 indicates a practically significant difference (Field, 2009).

4. RESULTS

The study was based on the financial years 2010 to 2016, since *"The financial crisis in the United States in 2008 sparked a global recession that lasted into 2009"* (Business Dictionary, 2017) that would lead to the data being skewed. The top 40 entities on each list were selected based on their market capitalisation on 31 December 2014 (as discussed in Section 3).

The following descriptive statistics was identified as possible variables in the determination of any practical significant differences between the capital structures of the target population. Table 1 provides a summary of the descriptive statistics and it also includes the minimum, maximum, mean, p-values and effect size of the debt to equity ratios.

Descriptive statistics, namely the measure of central tendency (the mean) and the measures of variability (minimum, maximum, standard deviations) were used to

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summarise the information. Independent t-test, based on these means and standard deviations, was used in the determination of any practical significant differences between the capital structures of the two groups. Table 1 provides a summary of the descriptive statistics including the minimum, maximum, mean and standard deviations of the debt to equity ratios, as well as the p-values and effect size used to test for differences.

Table-1: Summary of descriptive statistics of the group and the results of the t-test

							Independent t-test	
		N	Minimum	Maximum	Mean	Standard deviation	p-value	Effect size
year_2016	**Global**	40	0.10	13.81	3.78	3.95	0.02	0.46
	JSE	40	0.10	11.27	1.97	2.64		
year_2015	**Global**	40	0.12	18.09	4.01	4.61	0.03	0.41
	JSE	40	0.07	11.39	2.11	2.76		
year_2014	**Global**	40	0.14	20.73	4.27	5.27	0.02	0.43
	JSE	40	0.06	10.54	1.97	2.57		
year_2013	**Global**	40	0.10	16.20	3.73	4.68	0.03	0.41
	JSE	40	0.17	11.05	1.83	2.54		
year_2012	**Global**	40	0.06	16.63	3.87	4.84	0.03	0.40
	JSE	40	0.05	11.09	1.93	2.78		
year_2011	**Global**	40	0.10	16.97	3.97	5.04	0.03	0.41
	JSE	40	0.05	11.63	1.92	2.94		
year_2010	**Global**	40	0.09	18.06	4.01	5.22	0.05	0.36
	JSE	40	0.06	12.45	2.12	3.10		

Source: McGregor BFA (2017), Consolidated annual financial statements

Table 1 divides the descriptive statistics into two categories; Global top 40 MNEs and top 40 JSE-listed entities and reports on the results of the t-tests used to test for differences between these two groups.

The entities were also grouped according to the industries in which they function, and entities in industries that had no match in the other list were eliminated. After exclusion, 29 of the top 40 MNEs were left and 34 of the top 40 JSE-listed

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entities. However, in order to perform the statistical analysis also based on industries, industries with only one or two companies on the separate lists were excluded in order to avoid misinterpretation of the data.

After this exclusion, only three industries were left, which contained the following number of entities:

- Financial industry: 9 Global MNEs and 10 JSE-listed entities
- Basic materials industry: 4 Global MNEs and 4 JSE-listed entities and
- Consumer goods industry: 4 Global MNEs and 6 JSE-listed entities

The following descriptive statistics were identified as possible variables in the determination of any practical significant differences between the capital structures of the industry specific target population. Table 2 to 4 provide a summary of the descriptive statistics and it also includes the minimum, maximum, mean, p-values and effect size of the debt to equity ratios.

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Table 2 Summary of descriptive statistics of companies in the financial industry and the results of the t-test

							Independent t-test		Mann-Whitney test	
		N	Minimum	Maximum	Mean	Standard deviation	p-value	Effect size	p-value	Effect size
year_2016	**Global**	9	6.90	13.80	9.92	2.28	0.00	1.32	0.02	0.54
	JSE	10	0.44	11.27	4.42	4.16				
year_2015	**Global**	9	6.80	18.10	10.78	3.58	0.00	1.46	0.01	0.58
	JSE	10	0.42	11.39	4.39	4.38				
year_2014	**Global**	9	7.64	20.73	11.71	4.15	0.00	1.88	0.00	0.66
	JSE	10	0.19	10.54	3.92	4.06				
year_2013	**Global**	9	7.90	16.20	11.56	3.03	0.00	1.77	0.00	0.66
	JSE	10	0.33	11.05	4.01	4.26				
year_2012	**Global**	9	7.95	16.63	11.97	3.14	0.00	1.67	0.01	0.64
	JSE	10	0.30	11.09	4.34	4.58				
year_2011	**Global**	9	8.25	16.97	12.46	3.27	0.00	1.61	0.01	0.62
	JSE	10	0.29	11.63	4.44	4.98				
year_2010	**Global**	9	8.84	18.06	12.95	3.22	0.00	1.59	0.01	0.62
	JSE	10	0.34	12.45	4.95	5.03				

Source: McGregor BFA (2017), Consolidated annual financial statements

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Table 3 Summary of descriptive statistics of companies in the basic materials industry and the results of the t-test

							Independent t-test		Mann-Whitney test	
		N	Minimum	Maximum	Mean	Standard deviation	p-value	Effect size	p-value	Effect size
year_2016	**Global**	4	0.75	1.18	0.90	2.28	0.12	1.19	0.08	0.61
	JSE	4	0.53	0.90	0.66	4.16				
year_2015	**Global**	4	0.18	1.07	0.69	3.58	0.91	0.07	1.00	0.00
	JSE	4	0.36	0.95	0.72	4.38				
year_2014	**Global**	4	0.14	1.04	0.58	4.15	0.60	0.36	0.39	0.31
	JSE	4	0.32	1.10	0.72	4.06				
year_2013	**Global**	4	0.11	0.97	0.65	3.03	0.61	0.36	0.56	0.20
	JSE	4	0.34	1.11	0.79	4.26				
year_2012	**Global**	4	0.06	0.99	0.64	3.14	0.52	0.47	0.39	0.31
	JSE	4	0.29	1.20	0.84	4.58				
year_2011	**Global**	4	0.10	1.11	0.67	3.27	0.69	0.28	0.39	0.31
	JSE	4	0.31	1.21	0.79	4.98				
year_2010	**Global**	4	0.09	1.15	0.66	3.22	0.37	0.64	0.39	0.31
	JSE	4	0.32	1.59	0.99	5.03				

Source: McGregor BFA (2017), Consolidated annual financial statements

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Table-4: Summary of descriptive statistics of companies in the consumer goods industry and the results of the t-test

							Independent t-test		Mann-Whitney test	
		N	Minimum	Maximum	Mean	Standard deviation	p-value	Effect size	p-value	Effect size
year_2016	**Global**	4	1.00	3.40	2.09	2.09	0.12	1.19	0.09	0.54
	JSE	6	0.49	3.46	1.16	1.16				
year_2015	**Global**	4	0.94	2.50	1.61	1.61	0.91	0.07	0.09	0.54
	JSE	6	0.60	4.87	1.43	1.43				
year_2014	**Global**	4	0.86	2.01	1.39	1.39	0.60	0.36	0.20	0.40
	JSE	6	0.76	3.37	1.25	1.25				
year_2013	**Global**	4	0.88	1.69	1.29	1.29	0.61	0.36	0.39	0.27
	JSE	6	0.60	2.74	1.17	1.17				
year_2012	**Global**	4	1.01	1.70	1.34	1.34	0.52	0.47	0.20	0.40
	JSE	6	0.48	2.31	1.01	1.01				
year_2011	**Global**	4	0.96	1.74	1.31	1.31	0.69	0.28	0.20	0.40
	JSE	6	0.44	2.00	0.94	0.94				
year_2010	**Global**	4	0.78	1.95	1.29	1.29	0.37	0.64	0.20	0.40
	JSE	6	0.47	1.80	0.91	0.91				

Source: McGregor BFA (2017), Consolidated annual financial statements

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The p-values (in terms of the independent t-test), for all the years under consideration, in Table 1 is < 0.05 (except 2010) and indicative of statistically significant differences between the debt-to-equity ratios, capital structures, of the top 40 global MNEs and the top 40 JSE-listed entities. The means of the global MNEs indicate a much higher debt-to-equity ratio when compared to the ratios of the JSE-listed entities. Practically visible differences between the means are also indicated by the effect size, which is between 0.2 and 0.5 (0.37 - 0.46).

The p-values (in terms of both the independent t-test and the Mann-Whitney test), for all the years under consideration, in Table 2 is < 0.05 and indicative of statistically significant differences between the debt-to-equity ratios, capital structures, of the 9 global MNEs and the 10 JSE-listed entities in the financial industry. The means of the 9 global MNEs indicate a much higher debt-to-equity ratio when compared to the ratios of the 10 JSE-listed entities. Practically significant difference between the means is also confirmed by the effect size, which is > than 0.8 in terms of the independent t-test (1.32 – 1.88) and > than 0.5 in terms of the Mann-Witney test (0.54 – 0.66).

The p-values (in terms of both the independent t-test and the Mann-Whitney test), for all the years under consideration, in Table 3 is > 0.05 and not indicative of statistically significant differences between the debt-to-equity ratios, capital structures, of the 4 global MNEs and the 4 JSE-listed entities in the basic materials industry. The effect size, in terms of the independent t-test, indicates no practically significant difference between the means, which is between 0.5 and 0.8 (0.07 – 0.47) for 2011 - 2015 and practically visible differences are indicated in terms of the Mann-Witney test, which is between 0.3 and 0.5 (0.00 – 0.31). The 2013 (0.2) and 2015 (0.00) year was between 0.1 and 0.3 and therefore not indicative of practically significant differences and only in 2016 (0.61) indicative of a practically significant difference. In all the years under review, except 2016, the debt-to-equity ratios of the 4 JSE-listed entities were higher than the debt-to-equity ratios of the 4 global MNEs.

The p-values (in terms of both the independent t-test and the Mann-Whitney test), for all the years under consideration, in Table 4 are > 0.05 and not indicative of statistically significant differences between the debt-to-equity ratios, capital structures, of the 4 global MNEs and the 6 JSE-listed entities in the consumer goods industry. The effect size, in terms of the independent t-test, indicates no practically significant difference between the means, which is between 0.2 and 0.5 (0.11 – 0.48) for 2011 - 2015 and practically visible differences are indicated in terms of the Mann-Witney test, which is between 0.3 and ±0.5 (0.4 – 0.54) for all

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the years except 2013. The 2013 year was between 0.1 and 0.3 (0.27) and therefore not indicative of a practically significant difference. In all the years under review, the debt-to-equity ratios of the 4 global MNEs were higher than the debt-to-equity ratios of the 6 JSE-listed entities.

The means of the financial industry, especially the means of the 10 global entities, indicate that the entities are debt financed. Although the means for the entities in the consumer goods industry indicated a lower ratio, the means are also indicative of entities that are debt financed. The only industry that indicated that the entities are equity financed is the basic materials industry. These results confirm the findings by Ogbulu and Emeni (2012) that the debt has a major impact on firm value.

When the studies by Cassim (2014) and Saunders (2016) are applied, the financial industry would have to be excluded from the sample, since the financial industry's leverage differs from other industries (Gray, 2013). The result is that the descriptive analysis of the basic materials industry and the consumer goods industry did not indicate a practically significant difference based on the independent t-test, but it did indicate a practically visible difference based on the effect size.

3. CONCLUSION

The descriptive analysis of the top 40 global MNEs and the top 40 JSE-listed entities indicate a practically significant difference between the capital structures of these entities. The results may be driven by the debt-to-equity ratios in the financial industry. However, even if the financial industry is excluded there is still a practically visible difference (in terms of the Mann-Witney test) between the debt-to-equity ratios, and therefore the capital structures, of the top 40 global MNEs and the top 40 JSE-listed entities.

It can be deducted from the findings by Duan *et al.* (2012), Edim *et al.* (2014) and Anton (2016) that since the capital structure has an impact on firm value, the practically significant differences between the capital structures due to the debt-gearing may explain why the market capitalisation (firm value) of the top 40 global MNEs are higher than the market capitalisation (firm value) of the top 40 JSE-listed entities.

Since the top 40 global MNEs and the top 40 JSE-listed entities consist of various industries and the amount of entities per industry was limited, it is suggested that further research should be performed on a larger sample per industry of the entities listed as the top 500 global MNEs and the JSE-listed entities. A larger

sample would lead to more accurate findings. Also, financial data was used for the top 40 entities selected on 31 December 2014. For purposes of further research, the lists can be reselected on a more recent date to establish the current positioning of the entity based on the market capitalisation values. A comparison between the results of the current top 40 and the results for the top 40 on 31 December 2014 can then be made.

REFERENCES

Anggraeni, S. (2015). Money moves: tax planning in multinational companies a case of Microsoft. Masters Dissertation. Bergen: Norwegian School of Economics.

Anton, S.G. (2016). The impact of leverage on firm growth. Empirical evidence from Romanian listed firms. *Review of Economic and Business Studies*, 9(2), 147-158.

Bowen, G.A. (2009). Document analysis as a qualitative research method. *Qualitative Research Journal*, 9(2), 27-40.

Business Dictionary. (2017). Global recession. http://www.businessdictionary.com/definition/global-recession.html. Date of access: 31 Jul. 2017.

Cassim, R.J. (2014). The value of financial ratio analysis in predicting the failure of JSE-listed companies. Masters Dissertation. Vanderbijlpark: NWU.

Cohen, J. (1988). Statistical power analysis for the behavioral sciences. 2nd ed. Hillsdale, NJ: Lawrence Earlbaum Associates.

Correia, C., Flynn, D., Uliana, E. & Wormald, M. (2015). *Financial Management*. 8th ed. Cape Town: Juta.

Cristea, A. & Nguyen, D.X. (2013). Transfer pricing by multinational firms: new evidence from foreign firm ownerships. http://pages.uoregon.edu/cristea/ Research_files/cjn_tp13.pdf. Date of access: 13 May 2014.

Duan, H., bin Chik, A.R. & Malaysia, K. (2012). Institutional environment and capital structure. *International Journal of Financial Research*, 3(1), 15-21.

Dunning, J.H. & Sarianna, M.L. (2008). *Multinational Enterprises and the Global Economy*. 2nd ed. London: Edward Elgar Publicity.

Eden, L. (1998). Taxing Multinationals: Transfer pricing and corporate income taxation in North America. Toronto: University of Toronto Press Incorporated.

Edim, N.O., Atseye, F.A. & Eke, F.A. (2014). Relationship between Capital Structure and Firm's Performance: Theoretical Review. *Journal of Economics and Sustainable Development*, 5(17), 72-76.

Fernandez, P. & Pope, J. (2002). International taxation of multinational enterprises (MNESs). *Revenue Law Journal*, 12(1), 106-127.

Field, A. (2009). *Discovering Statistics using SPSS*. 3rd ed. London: Sage publications Ltd.

Ghoshal, S. & Barlett, C.A. (1990). The Multinational corporation as an interorganisational network. *The Academy of Management Review*, 15(4), 603-625.

Gray, D.E. (2009). *Doing Research in the Real World*. 2nd ed. London: Sage.

Gray, W.R. (2013). Why exclude financial firms from quantitative studies. http://blog.alphaarchitect.com/2013/11/25/why-exclude-financial-firms-from-quantitative-studies/#gs.xPFRhWs. Date of access: 4 Aug. 2014.

Harmse, L.H. (2014). Alternatives for the treatment of secondary transfer pricing adjustments in South Africa. Masters Dissertation. Potchefstroom: NWU.

Jay, S. (2003). Selecting sources of finance for business. http://www.accaglobal.com/content/dam/acca/global/PDF-students/2012s/sept09_jayv2.pdf. Date of access: 3 Aug. 2017.

Kopits, G.F. (1976). Taxation and multinational firm behaviour: a critical survey. *Staff Papers - International Monetary Fund*, 23(3), 624 – 673.

Laerd. (2015). Descriptive and inferential statistics. https://statistics.laerd.com/statistical-guides/descriptive-inferential-statistics.php.html. Date of access: 24 Jan. 2016.

Laerd. (2017). Mann-Whitney U Test using SPSS Statistics. https://statistics.laerd.com/spss-tutorials/mann-whitney-u-test-using-spss-statistics.php. Date of access: 4 Aug. 2017.

Lynch, P. (2009). Optimum capital structure. http://www.accaglobal.com/content/dam/acca/global/PDF-students/2012s/sa_junjul09_lynch.pdf. Date of access: 24 Jan. 2016.

Madura, J. (2011). *International Financial Management*. 11th ed. Ohio: Cengage.

McGregor BFA. (2017). http://expert.inetbfa.com/ Date of access: 27 Jul. 2017.

OECD. (2013). Addressing base erosion and profit shifting. France: OECD Publishing.

OECD. (2014). National accounts at a glance. http://www.oecd-ilibrary.org/docserver/download/3014011ec035.pdf. Date of access: 24 Jan. 2016.

Ogbulu, O.M. & Emeni, F.K. (2012). Capital Structure and Firm Value: Empirical Evidence from Nigeria. *International Journal of Business and Social Science*, 3(19), 252-261.

Pallant, J. (2013). *SPSS Survival Manual*. 5th ed. Berkshire: McGraw-Hill.

Randeberg, M. & Selvik, H. (2014). A study of tax minimisation strategies in multinational companies. Masters Dissertation. Bergen: Norwegian School of Economics.

Saunders, W. (2016). Identifying the optimum ownership structure as a tax avoidance strategy of multinational entities: A JSE top 40 perspective. Masters Dissertation. Vanderbijlpark: NWU.

Swart, J.J., Swanepoel, M.J & Surujlal, J. (2014). A critical analysis of government spending on sport: Mass participation and school allocation. *African Journal for Physical, Health Education, Recreation and Dance*, October 2014 (Supplement 2:2), 251-265.

Sullivan, G.M. (2012). Using effect size – or why the *P* value is not enough. *Journal of Graduated Medical Education*, 4(3), 279–282.

Welman, C., Kruger, S.J. & Mitchell, B. (2005). *Research Methodology*. 3rd ed. Cape Town: Oxford University Press.

Law reports:

United States. (2000). Shedd v Commissioner of Internal Revenue TC Memo 2000-292.

United States. (2011). Pritired I LLC v United States 816 F. Supp. 2d 693 (SD Iowa 2011).

United States. (2012). Hewlett-Packard Co. v Commissioner of Internal Revenue 139 TC No. 8.

United States. (2012). PepsiCo v Commissioner of Internal Revenue TC Memo 2012-269.