# INVESTIGATING STEINHOFF INTERNATIONAL HOLDINGS' RESULTS: APPLICATION OF INTEGRATED FINANCIAL DECISION-MAKING MODEL AND LEAN ACCOUNTING PRINCIPLES

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**—Abstract —**
The business environment has changed drastically since the start of the new millennium. Over the years, owners of businesses have been sidelined from the daily operations of companies by managers and directors. This phenomenon is known as the agency theory whereby the managers and directors are driven, like shareholders and investors, by wealth creation**,** which sometimes culminates in greed. This greed usually ends with financial losses to the shareholders and investors. Investors use traditional financial decision-making models to determine the best investment possibilities. However, these models have failed shareholders and investors time and time again. Shareholders and investors are looking towards the accounting profession for answers. The integration of lean accounting principles in decision-making models could be a possible solution. The purpose of this study is to investigate if an integrated financial decision-making model, using lean accounting principles, could have provided the shareholders and investors of the ill-stricken Steinhoff International Holdings with results, which could have led to different decisions.

A qualitative research approach using document analysis was employed in the study. The document analysis was deemed to be appropriate as it is a systematic procedure for the review and evaluation of documents. The annual financial statements of Steinhoff International Holdings for the five years ending 30 September 2016 were analysed and applied to the integrated financial decision-making model using lean accounting principles.

The results of the analysis revealed that using the integrated financial decision-making model more conservative results on key financial ratios were obtained, compared to traditional financial decision-making models. These more conservative results could have changed shareholders and investors' decision

regarding Steinhoff International Holdings, long before its 52 week share price range fell from 7401c to 201c, emanating in a 97,3% loss in value to shareholders. The recommendation of this study is to integrate financial decision-making models with lean accounting principles. This study could impact shareholders and investors' decision-making, providing an alternative and more conservative financial decision-making model.

**Keywords:** Financial ratios, analysis, impact, decision models, financial models.

**JEL Clarification:** G17

## 1 INTRODUCTION

The new millennium saw a drastically changed business environment. Global trading increase as companies pursue new markets and expansion (OECD, 2010). Which result in business owners being sidelined from operations. Companies are being managed by managers and directors. This phenomenon is known as the agency theory, whereby the managers and directors are driven, like shareholders and investors, by wealth creation. In the quest of creating wealth, managers and directors endeavour to ensure a good relationship between the company's liquidity, asset management, debt management and profitability. Correia (2015) argues that a good relationship between the company's liquidity, asset management, debt management and profitability will result in a high market value. This high market value is evident in the share price of listed companies. Because managers and directors own some shares in the company, Correia (2015) predicts that managers and directors may put their interest first, which may culminate in greed.

The greed of managers and directors may be detrimental for other stakeholders. The Business dictionary (2017) explains that stakeholders can affect or be affected by the actions of a company's managers and directors. Stakeholders use financial information for decision-making purposes. Van Rensburg (2010) outlines decision-making as the process by which alternatives are decisively measured and the paramount one is chosen. In this process stakeholders will rely on the accounting profession to provide comparable, comprehensive and verifiable financial information (Oberholster, Koppeschaar & Janse van Rensburg, Binnekade, Hattingh, De Klerk, Russouw & Du Toit, 2011) about a company.

However, the accounting profession, both globally and in South Africa, is currently under enormous pressure. Steinhoff International Holdings, one of the top 10 Rand hedge JSE companies lost more than 60% of its value in 24 hours, due to alleged reporting irregularities. It seems that on a monthly basis, auditing firms are being exposed and fined for reporting irregularities. It appears that accountants have lost their way to provide useful information to stakeholders as set out in the financial reporting framework of the International Accounting Standards Board (IASB). IASB (2010) states that *"the objective of financial reporting is the provision of useful information to 'existing and potential investors, lenders and other creditors in making decisions about providing resources' to the reporting entity"*. Investors use traditional financial decision-making models to determine the best investment possibilities.

Traditional financial decision-making models depend on financial ratios and have been extensively researched, with Wall (1919) deemed to be the pioneer study. Gouws and Lucouw (1999) warned that traditional financial decision-making models are not exact and must be viewed holistically. Cassim (2014) demonstrates that these decision-making models are still a useful analysis tool. However, it seems that these traditional financial decision-making models have failed shareholders and investors time and time again. Carels, Maroun and Padia (2014) critique traditional financial decision-making models due to the string of corporate scandals, environmental disasters, and tenacious socio-economic problems. De Arbulo-López and Fortuny-Santos (2010) and Hyer and Wemmerlöv (2002) argue that the flaws in traditional financial decision-making models relate to the *ex post facto* view, arbitrary cost allocation policies, mismatching between accounting policies and actual events, inappropriate classification and valuation of inventories and the failure to provide appropriate customer value-related reports.

Wall and MacKenzie (2015), Sedevich Fonds (2012), Barnabè (2011) and Karsak (2004) all demonstrate that the use of integrated decision-making models is more supportive to shareholders and investors decisions. These studies all developed noteworthy integrated financial decision-making models that have been used with relative good success by shareholders and investors globally. Baroma, Bellisario, Chirico and Apoloni (2013) proposed that a balanced scorecard (BSC) should be integrated with lean philosophy, providing a more effective measurement tool in uncertain financial conditions. Furthermore, Baroma *et al*. (2013) suggest the

development of an integrated financial decision-making model using lean accounting principles.

Lean accounting principles are the consequence of an evolving management accounting system (Ofileanu & Topor, 2014). De Arbulo-López and Fortuny-Santos (2010) outline that the aim of lean accounting principles are providing accurate, timeous and understandable financial information for both financial as well as non-financial users. Maskell (2013), Ranaweera (2010) and Maskell and Baggaley (2004) all demonstrate that lean accounting principles provide for better financial decision-making opportunities. Fonou Dombeu (2016), Ramezani and Razmeh (2014), Enoch (2013), Salah and Zaki (2013) all identify value stream reports (VSR) as one of the essential principles of lean accounting.

VSR can help to measure, control and manage operational, capacity and financial information (Ofileanu & Topor, 2014). Chakrabortty and Kumar (2011), Woehrle, and Abou-Shady (2010) argue that VSR evaluate the financial information for historical, current and future periods. Maskell and Kennedy (2007) assessed that VSR are helpful to identify areas that need to improve performance and decision-making. VSR express the real cost of the value stream unlike traditional accounting reports that use standard costing (Maskell & Baggaley, 2004). Using these lean accounting principles, Swanepoel (2018) developed an integrated financial decision-making model and empirically tested the model demonstrating that the results attained are more conservative than that of traditional financial decision-making models.

The study aims to establish whether an integrated financial decision-making model using lean accounting principles could provide shareholders and investors with an alternative and more conservative financial decision-making model. The purpose of this study is to investigate if an integrated financial decision-making model using lean accounting principles could provide the shareholders and investors of the ill-stricken Steinhoff International Holdings with results that could have led to different decisions. In achieving this, the study will contribute to the body of knowledge providing shareholders and investors with an alternative and more conservative financial decision-making model.

## 2 METHODOLOGY

The study employs a qualitative research approach because the purpose of the study is to investigate if an integrated financial decision-making model using lean accounting principles could provide the shareholders and investors of the ill-stricken Steinhoff International Holdings with results that could have led to different decisions. Qualitative research is an investigative method that is used to discover, apprehend and illuminate (Marshall & Rossman, 2014) a contemporary (Gray, 2009) issue; by collecting, analysing and interpreting qualitative data (Creswell, 2009) based on the problem statement and research objectives (Flick, 2011).

### 2.1 Instrument and procedures

In an attempt to obtain accurate information about Steinhoff International Holdings document analysis was employed to collect data as proposed by Flick (2011). The document analysis was deemed to be appropriate as it is a systematic procedure to review and evaluate documents. Bowen (2009) demonstrates that the selected documents must contribute to the aim of the study. Data must be authentic, credible and accurate, as Creswell (2009) contends that the use of data that were compiled by professionals to this authenticity, credibility and accuracy.

Using the published annual financial statements of Steinhoff International Holdings for the five years ending 30 September 2016 was deemed most applicable. The published annual financial statements fulfil the criteria of authenticity, credibility and accuracy as well as some other non-financial information that would be useful for the preparation of financial decision-making models. Therefore, making it possible to compare the results of traditional financial decision-making models and the integrated financial decision-making model using lean accounting principles. The data from the published annual financial statements were identified, categorised, measured, analysed and construe in the context of the study. Table 1 provides a summary of what the document analysis divulges.

**Table 1 Results of the document analysis**

| Description | 2012 Rm | 2013 Rm | 2014 Rm | 2015 Rm | 2016 Rm |
|---|---|---|---|---|---|
| **Financial performance** | | | | | |
| Revenue | 80 434 | 115 486 | 117 364 | 134 868 | 134 868 |
| Cost of sales | 51 800 | 75 401 | 75 446 | 86 541 | 86 541 |
| Gross profit | 28 634 | 40 085 | 41 918 | 48 327 | 48 327 |
| Employee related expenditure | 14 181 | 18 481 | 17 929 | 20 562 | 20 562 |
| Production cost (Material & conversion costs excluding labour) | 51 800 | 75 401 | 75 446 | 86 541 | 86 541 |
| Operating expenses | 20 719 | 29 120 | 27 796 | 30 499 | 30 499 |
| Earnings before interest, taxation & amortisation (EBITA) | 9 417 | 12 475 | 15 903 | 20 468 | 20 468 |
| Interest expenses | 2 511 | 3 267 | 3 486 | 3 830 | 3 830 |
| Net operating profit before tax (NOPBT) | 6 906 | 9 208 | 12 417 | 16 638 | 16 638 |
| Taxation | 863 | 1 268 | 1 954 | 1 343 | 1 343 |
| Net operating profit after tax (NOPAT) | 6 043 | 7 940 | 10 463 | 15 295 | 15 295 |
| **Financial position** | | | | | |
| Non-current assets | 34 878 | 44 811 | 53 995 | 58 294 | 58 294 |
| Current assets | 42 443 | 49 433 | 49 782 | 94 776 | 94 776 |
| Other assets | 55 741 | 70 395 | 98 544 | 160 470 | 160 470 |
| Total assets | 133 062 | 164 639 | 202 321 | 313 540 | 313 540 |
| Owners' equity | 53 637 | 66 619 | 87 776 | 182 170 | 182 170 |
| Non-current liabilities | 44 639 | 58 254 | 69 317 | 74 830 | 74 830 |
| Current liabilities | 34 786 | 39 766 | 45 228 | 56 540 | 56 540 |
| Total equity & liabilities | 133 062 | 164 639 | 202 321 | 313 540 | 313 540 |
| Opening inventory | 8 813 | 14 431 | 16 320 | 17 921 | 26 394 |
| Closing inventory | 14 431 | 16 320 | 17 921 | 26 394 | 26 394 |

Source: Fin24 (2018)

Table 1 reveals the key results that are necessary to compare the key financial ratios of traditional financial decision-making models and the integrated financial decision-making model using lean accounting principles of Steinhoff International

Holdings for the five years ending 30 September 2016. The results are discussed in the results section.

### 2.2 Data analysis

Data were captured on an MS excel spreadsheet and analysed. Using the data obtained from the document analysis, a Du Pont analysis was prepared based on traditional accounting. Furthermore, the data were subjected to lean accounting principles and an adjusted Du Pont analysis were done. The study aims to determine if shareholders and investors would react differently if lean accounting principles are applied to financial decision-makings models. Shareholders and investors always want to measure expected return and risk for both traditional financial decision-making models and the integrated traditional financial decision-making model, using lean accounting principles. It was therefore necessary to calculate the expected return ($R_e$), standard deviation ($\sigma$), variance ($\sigma^2$) and the coefficient of variance (CV), expressing the units of risk per one per cent (1%) of return.

## 3 RESULTS

This section illustrates how Steinhoff International Holdings' share price fell from 7401c to 201c during 52 weeks, shedding 97,3% of its share price due to an alleged accounting scandal, which lead to the resignation of the CEO, Markus Jooste. Comparing the results between traditional accounting reports and VSRs as well as the Du Pont analysis and finally measuring the expected return and risk for Steinhoff International Holdings.

### 3.1 Sample composition

The study uses the financial results of Steinhoff International Holdings for the five years ending 30 September 2016. This was done due to convenience and ease of access. In light of the alleged accounting scandal (Citizen, 2018) it was decided, to focus on this period, as the company suffered huge losses due to these allegations. The reported 52 week share price range fell from 7401c to 201c (Bloomberg, 2018), with the worse losses occurring during the first week of December 2017, losing more than 60% of its value within 24 hours.

### 3.2 Comparing the results between traditional accounting reports and value stream reports

It is necessary to compile a VSR when examining the key results between the traditional financial decision-making models and the integrated financial decision-making model using lean accounting principles. The VSR group all costs within the value stream together, whether the cost is being classified as a direct- or an indirect cost. VSR contain all direct- and indirect cost incurred, with the exception of material cost. Material will be calculated from material actually purchased. The treatment of material like this is remarkably different to traditional accounting reports (TAR) and may result to higher costs and lower profits. However, traditional accounting will treat this as inventory, whereby the inventory will increase and the cost per unit decrease, resulting in higher profits due to lower costs. This parody of the profit encourages inventory pilling to reduce cost and increase profits. Lean accounting principles ignore inventory as a cost of sales in the value stream and expense the total purchases in the current period, resulting in lower profits, this can be seen as a more conservative approach, as it will result in a lower ROE. Table 2 displays the results of the TAR and Table 3 that of the VSR for the five-year period ending 30 September 2016.

**Table 2 Results of the Traditional accounting report (TAR)**

| Measure | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|
| Sales | 80434 | 115486 | 117364 | 134868 | 134868 |
| Less cost of sales | 51800 | 75401 | 75446 | 86541 | 86541 |
| Opening inventory | 8813 | 14431 | 16320 | 17921 | 26394 |
| Purchases | 57418 | 77290 | 77047 | 95014 | 86541 |
| Closing inventory | 14431 | 16320 | 17921 | 26394 | 26394 |
| GP | 28634 | 40085 | 41918 | 48327 | 48327 |
| Other costs | 19217 | 27610 | 26015 | 27859 | 27859 |
| EBITA | 9417 | 12475 | 15903 | 20468 | 20468 |
| NOPBT | 6906 | 9208 | 12417 | 16638 | 16638 |
| Taxation | 863 | 1268 | 1954 | 1343 | 1343 |
| NOPAT | 6043 | 7940 | 10463 | 15295 | 15295 |

**Table 3 Results of the value stream report (VSR)**

| Measure | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|
| Sales | 80434 | 115486 | 117364 | 134868 | 134868 |
| Material & conversion cost | 57418 | 77290 | 77047 | 95014 | 86541 |
| VSGP | 23016 | 38196 | 40317 | 39854 | 48327 |
| Employee cost | 14181 | 18481 | 17929 | 20562 | 20562 |
| Expenses | 5036 | 9129 | 8086 | 7297 | 7297 |
| Inventory change | -5618 | -1889 | -1601 | -8473 | 0 |
| Opening inventory | 8813 | 14431 | 16320 | 17921 | 26394 |
| Closing inventory | 14431 | 16320 | 17921 | 26394 | 26394 |
| GP | 28634 | 40085 | 41918 | 48327 | 48327 |
| Calculated EBITA | 3799 | 10586 | 14302 | 11995 | 20468 |
| Calculated NOPBT | 1288 | 7319 | 10816 | 8165 | 16638 |
| Calculated taxation | 184 | 1169 | 2020 | 717 | 1461 |
| Calculated NOPAT | 1104 | 6150 | 8796 | 7448 | 15177 |

From Table 2 and Table 3 it is evident that the VSR performance results are significantly lower than that of the TAR. The influence of this lower performance results is tested using the Du Pont analysis.

## 3.3 Comparing the Du Pont analysis

The reviewed literature argue that profit is not the ultimate objective of shareholders and investors, but rather adequate return on shareholders' funds. It can therefore be deduced that adequate return on shareholders' funds will achieve shareholders and investors' primary objective, namely maximising wealth. The Du Pont analysis is a recognised structured analysis which measure how effective this objective was attained during a financial period. The Du Pont analysis indicates the adjustment in a company's ROE is the combined impact of net sales, net profit, non-current-, current assets, and ordinary equity (Swanepoel 2018). Table 4 and Table 5 summarise the Du Pont analysis using TAR and VSR results for the five-year period ending 30 September 2016.

**Table 4 Du Pont analysis using the results of the traditional accounting report (TAR)**

| Measure | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|
| NOPBT | 8,59% | 7,97% | 10,58% | 12,34% | 12,34% |
| TATO | 60,45% | 70,14% | 58,01% | 43,01% | 43,01% |
| ROA | 5,19% | 5,59% | 6,14% | 5,31% | 5,31% |
| FLM | 2,48 | 2,47 | 2,30 | 1,72 | 1,72 |
| ROE | 12,88% | 13,82% | 14,15% | 9,13% | 9,13% |

**Table 5 Du Pont analysis using the results of the value stream report (VSR)**

| Measure | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|
| NOPBT | 1,60% | 6,34% | 9,22% | 6,05% | 12,34% |
| TATO | 60,45% | 70,14% | 58,01% | 43,01% | 43,01% |
| ROA | 0,97% | 4,45% | 5,35% | 2,60% | 5,31% |
| FLM | 2,48 | 2,47 | 2,30 | 1,72 | 1,72 |
| ROE | 2,40% | 10,99% | 12,32% | 4,48% | 9,13% |

By comparing the two tables above, the FLM remains unchanged. It can be deduced that lean accounting principles does not influence the capital structure of the company. The income and investment, however, are influenced by the adoption of lean accounting principles. The combined influence on the relationship between income and investment influences the calculated ROE. Comparing Table 4 and Table 5 illustrates this clearly.

By applying the Du Pont analysis to the five-year period ending 30 September 2016 the following important trend is exposed. Du Pont's objective is to measure the ROE, and therefore the focus on comparing the results between traditional- and lean accounting focused on reporting ROE. The ROE is always lower for lean accounting. An important conclusion is that the stakeholders may consider a different decision than the decision that would have been made using traditional accounting principles. This finding is consistent with the findings of Swanepoel (2018). It can be reasoned that the newly developed integrated financial decision-making model using lean accounting principles will influence the decision-making of stakeholders. The calculated ROEs are significantly different between the traditional and integrated. These again are due to the more conservative

manner in which the Du Pont analysis would be calculated using the integrated financial decision-making model that applies lean accounting principles.

### 3.4 Measuring the expected return of Steinhoff International Holdings

A shareholder or investor will consider the return on an investment in order to determine whether or not it was a good investment decision. Using the results obtained from the Du Pont analysis and the use of a probability distribution the expected return was determined for both TAR and VSR. The expected return for Steinhoff International Holdings are reported in Table 6 TAR results and Table 7 VSR results.

**Table 6 Expected return for Steinhoff International Holdings calculated on TAR results**

| Year | Probability | Return | Expected return |
|---|---|---|---|
| 2012 | 0,2 | 12,88% | 2,58% |
| 2013 | 0,2 | 13,82% | 2,76% |
| 2014 | 0,2 | 14,15% | 2,83% |
| 2015 | 0,2 | 9,13% | 1,83% |
| 2016 | 0,2 | 9,13% | 1,83% |
| | $R_e$ = Expected return | | 12,00% |

**Table 7 Expected return for Steinhoff International Holdings calculated on VSR results**

| Year | Probability | Return | Expected return |
|---|---|---|---|
| 2012 | 0,2 | 2,40% | 0,48% |
| 2013 | 0,2 | 10,99% | 2,20% |
| 2014 | 0,2 | 12,32% | 2,46% |
| 2015 | 0,2 | 4,48% | 0,90% |
| 2016 | 0,2 | 9,13% | 1,83% |
| | Re = Expected return | | 7,87% |

By calculating the expected return ($R_e$), the VSR result is shown as 7,87%, which is significantly lower than applying the TAR over the same period. Shareholders

and investor will therefore be willing to pay less for the company's shares if lean accounting principles are applied.

### 3.5 Measuring the risk for Steinhoff International Holdings

Measuring risk can be expressed as the standard deviation. The standard deviation is the square root of the variance. Table 8 and Table 9 summarise the variance calculation for TAR and VSR.

**Table 8 Calculating the variance for Steinhoff International Holdings TAR results**

| Year | Probability | Deviation | Deviation squared | Variance |
|---|---|---|---|---|
| 2012 | 0,2 | 1,05 | 1,10 | 0,22 |
| 2013 | 0,2 | 2 | 4,00 | 0,80 |
| 2014 | 0,2 | 2,32 | 5,38 | 1,08 |
| 2015 | 0,2 | -2,69 | 7,24 | 1,45 |
| 2016 | 0,2 | -2,69 | 7,24 | 1,45 |
| | | | $\sigma^2$ = Variance = | 4,99 |

Shareholders and investors always consider return in relation to risk associated with the investment. It is necessary to consider the variance ($\sigma^2$) when determining the risk. By applying the lean accounting principle to the five-year reported results of Steinhoff International Holdings $\sigma^2$ is 14,49, which is significantly higher than that of the traditional accounting results $\sigma^2$ 4,99. This variance result in a standard deviation ($\sigma$) of 2,23 (TAR) and 3,81 (VSR).

**Table 9 Calculating the variance for Steinhoff International Holdings VSR results**

| Year | Probability | Deviation | Deviation squared | Variance |
|---|---|---|---|---|
| 2012 | 0,2 | -5,46 | 29,81 | 5,96 |
| 2013 | 0,2 | 3,12 | 9,73 | 1,95 |
| 2014 | 0,2 | 4,46 | 19,89 | 3,98 |
| 2015 | 0,2 | 3,38 | 11,42 | 2,28 |
| 2016 | 0,2 | 1,27 | 1,61 | 0,32 |
| | | | $\sigma^2$ = Variance = | 14,49 |

## 4 DISCUSSION

Considering what happen to the share price of Steinhoff International Holdings, which fell 97,3% (from 7401c to 201c) in 52 weeks, shareholders and investors were once again reminded of the harsh reality that investing involves taking on significant levels of risk. Therefore it is necessary to consider expected returns and standard deviations in order to conclude on whether the return of an investment out perform its risk.

### 4.1 The mean-variance rule

Once the expected return and the risk were established, the mean-variance rule becomes apparent, this rule is applicable to all investment decisions made by risk-averse shareholders and investors. The mean-variance rule states that investment A will be preferred to investment B, provided one of the following two conditions exist: 1] either the mean expected return on investment A exceeds that of investment B and the variance of A is equal to or less than that of B; or 2] the mean expected return on A exceeds or is equal to the expected return on B and the variance of B is greater than that of A. The next section will consider this.

### 4.2 Coefficient of variance

The coefficient of variance (CV) relates to the units of return to the units of risk. It expresses the unit of risk per 1% of return as follows: $CV = \sigma / R_e$. The results indicate that TAR exposes the shareholder and investor to 0.19 units of risk for each expected unit of return, while VSR exposes the shareholders and investors to only 0.48 units of risk for each unit of return. On a relative basis therefore, TAR seems to offer a better trade-off between expected return and risk.

**Table 10 Calculating the CV for TAR and VSR**

| TAR | | VSR | |
|---|---|---|---|
| Std Dev | 2,230 | Std Dev | 3,810 |
| $R_e$ | 12,00 | $R_e$ | 7,87 |
| CV | 0,19 | CV | 0,48 |

Correia (2015) critiques this approach as not being rigorous, it was only used as an indicator to assist shareholders and investors when selecting two alternatives

with different expected returns. However, if a shareholder or investor considers these results in view of the integrated financial decision-making model, the VSR results, the investment in Steinhoff International Holdings could have been too risky. Therefore it can be argued that using the integrated financial decision-making model using lean accounting principles resulted in more conservative results.

## 5 CONCLUSSION

When reflecting on the purpose of this study, the results of the investigation revealed the following. The shareholders and investors of Steinhoff International Holdings got different results if an integrated financial decision-making model using lean accounting principles was applied to the published financial statements. These results could have led to different decisions by the shareholders and investors of Steinhoff International Holdings.

The recommendation of this study is to integrate financial decision-making models with lean accounting principles in all industries. This study could influence shareholders' and investors' decision-making, providing an alternative and more conservative financial decision-making model.

## REFERENCES

Barnabè, F. (2011). A system dynamics-based Balanced Scorecard to support strategic decision making. *International Journal of Productivity and Performance Management*, 60(5), 446-473.

Baroma, B., Bellisario, A., Chirico, A. & Apoloni A. (2013). Breakthroughs in the Management Accounting Science: Imaging a Balanced Scorecard Thought by Lean Philosophy Rationales. *Transition Studies Review*, DOI 10.1007/s11300-013-0279-1. Accessed 2017/12/22.

Bloomberg. (2018). *Quote*. https://www.bloomberg.com/quote/SNH:SJ/. Accessed 2018/06/12.

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

Business Dictionary. (2017). *Stakeholders.*

http://www.businessdictionary.com/definition/stakeholder.html/. Accessed 2017/03/14.

Carels, C., Maroun, W. & Padia, N. (2014). Integrated reporting in the South African Mining Sector. *Corporate Ownership & Control*, 11(1), 992.

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

Chakrabortty, R.K. & Kumar, S.P. (2011). Study and implementation of lean manufacturing in a garment manufacturing company: Bangladesh perspective. *Journal of optimization in industrial engineering*, 7, 11-22.

Citizen. (2018). *Five things you need to know about Steinhoff*. https://citizen.co.za/news/news-cns/1752460/five-things-you-need-to-know-about-steinhoff/. 2018/06/15.

Correia, C., Flynn, D., Uliana, E., Wormald, M. & Dillon, J. (2015). Financial Management. 8th edition. Cape Town: Juta & Co Ltd.

Creswell, J.W. (2009). Research design, qualitative, quantitative and mixed methods approaches. 3rd edition. Thousand Oaks: Sage.

De Arbulo-Lopez, P.R. & Fortuny-Santos, J. (2010). An accounting system to support process improvements: transition to lean accounting. *Journal of Industrial Engineering and Management*, 3(3), 576-602.

Enoch, O.K. (2013). Lean accounting and lean business philosophy in Nigeria: an exploratory research. *International journal of economics, finance and management*, 2(7), 508-515.

Fin24. (2018). *Steinhoff International Holdings*. https://www.fin24.com/Company/Steinhoff-international-holdings-nv/. 2018/02/12.

Flick, U. (2011). Introducing research methodology: a beginner's guide to doing

a research project. Thousand Oaks: Sage.

Fonou Dombeu, N.C. (2016). Preparedness of accounting grauates in lean accounting in South Africa. Masters Dissertation. Vanderbijlpark: North-West University.

Gray, D.E. (2009). Doing research in the real world. 2nd edition. London UK: Sage Publications.

Hyer, N. L. & Wemmerlöv, U. (2002). Reorganizing the factory: competing through cellular manufacturing. Portland: Productivity Press.

International Accounting Standards Board. (2010). The Conceptual Framework for Financial Reporting. London: IFRS Foundation.

Karsak, E.E. (2004). Fuzzy multiple objective, decision-making approach to prioritize design requirements in quality function deployment. *International Journal of Production Research*, 42(18), 3957-3974.

Marshall, C. & Rossman, G. (2014). Designing qualitative research. 3rd edition. London: Sage publication.

Maskell, B.H. & Baggaley, B.L. (2004). Practical Lean Accounting: A Proven System for Measuring and Managing the Lean Enterprise. New York: Productivity Press.

Maskell, B.H. & Kennedy, F.A. (2007). Why do we need Lean Accounting and how does it work? *The journal of Corporate Accounting and Finance*, 18, 59-73.

Maskell, B.H. (2013). *What is lean accounting*? http://www.maskell.com/LeanAcctg.htm. 2017/02/18.

Oberholster, J.G.I., Koppeschaar, Z.R., Janse van Rensburg, C., Binnekade, C.S., Hattingh, M., De Klerk, M., Rossouw, J. & Du Toit, E. (2011). Introduction to IFRS. 4th ed. Johannesburg: Lexis Nexis.

OECD. (2010). Transfer pricing guidelines for multinational enterprises and tax

administrators. France: OECD Publishing.

Ofileanu, D. & Topor, D. (2014). Lean Accounting - An Ingenious Solution for Cost Optimization. *International Journal of Academic Research in Business and Social Sciences,* 4(4), 342-352.

Ramezani, A.R. & Razmeh, A.P. (2014). Kaizen and Kaizen costing. *Academic Journal of Research in Business & Accounting*, 2(8), 43-52.

Ranaweera, D. (2010). Accounting for Lean, Six Sigma or Lean Six Sigma and Lean Accounting. *The Cima Edge, CIMA Sri Lanka Division*, 2(5), 5-7.

Salah, W. & Zaki, H. (2013). Product Costing in Lean Manufacturing Organizations. *Research Journal of Finance and Accounting*, 4(6), 86-98.

Sedevich Fonds, L.A. (2012). Integration of quality cost and accounting practices. *The Total Quality Management (TQM) Journal*. 24(4), 338-351.

Swanepoel, M.J. (2018). The development of an integrated financial decision-making model using lean accounting. PhD Dissertation. Vanderbijlpark: North-West-University.

Van Rensburg, L.R.J. (2010). Business Management: an introduction. 3rd edition. Pretoria: Van Schaik.

Wall, A. (1919). Study of credit barometrics, *Federal Reserve Bulletin*, 5(3), 189-301.

Wall, K.D. & MacKenzie, C.A. (2015). Military Cost–Benefit Analysis: Theory and Practice. Edited by Melese, F., Richter,A. & Solomon, B. London and New York: Routledge.

Woehrle, S.L. & Abou-Shady, L.A. (2010). Using Dynamic Value Stream Mapping and Lean Accounting Box Scores to Support Lean Implementation. *American Journal of Business Education*, 3(8), 67-75.