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Impact of human capital investment and company financial performance in the South African banking industry

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A research report submitted to the Faculty of Commerce, Law and Management, University of Witwatersrand, in partial fulfilment of the requirements for the degree of Master of Business Administration

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ABSTRACT

The banking industry in South Africa facilitates job creation, the establishment of crucial infrastructure, sustainable development and economic growth for South Africans and the country. It is the largest sector in the South African economy, contributing 21.1% of GDP. In the contemporary South African environment, to compete and attain high performance, banks should position for growth. Research suggests that human capital investment, including training and development and salary spend, play a key role in the companies' and industries' outputs, given a set of inputs (productivity). Researchers also propose that human capital investment decisions are intrinsically linked to the success of a business and ultimately to the probability of survival.

The aim of this study was to assess the relationship between human capital investment (HCI) and company's financial performance within the South African Banking industry. This study focuses on the registered banks with the SARB that are listed on the Johannesburg Stock Exchange, excluding the mutual and co-operative banks. The analysis was conducted on six of the seven JSE listed Bank, and these include the top five banks that constitute over 80% of the South African banking industry assets and market share. Data was collected from Annual reports of the banks from 2004 to 2014 to calculate financial performance indicators to conduct a correlation analysis of training and development, average salary spend and financial performance. In summary, the study supports the notion that the correlation of human capital investment with financial performance is subject to the indicator that has been selected to represent performance. Findings concluded that there's a strong positive correlation between human capital investment and net profit margin and return on equity indicators that represents profitability of the bank. However, it was also found there is a strong negative correlation between human capital investment and return on assets that represents efficient use of assets and value creation.

DECLARATION

I, Ursula Basani Duiker, declare that this research report is my own work except as indicated in the references and acknowledgements. It is submitted in partial fulfilment of the requirements for the degree of Master in Business Administration in the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in this or any other university.

Ursula Basani Duiker

Signed at: …….

On the ……day of ……. 2016

DEDICATION

This research project is dedicated to my husband Thato, our children, Keamogetse, Makhanani, Motse and Akani, my father, the late BM Mashele, my beloved mothers Collinah Mashele, Selinah Duiker and Mpho Maja, my siblings, Cynthia, Gladwin, Jill, Cliff-Davis, Timothy Jnr, Palesa and Sakane, my nephews and nieces and my late friend Zandi Mashishi. Let this be an inspiration to our children and generations to follow. No words can express my gratitude for all the love and support you have shown me. You are the pillar of my strength.

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CHAPTER 1: INTRODUCTION

1.1 Purpose of study:

The aim of this study is to assess the relationship between human capital investment and company's financial performance within the South African Banking industry.

1.2 Context of the study:

The context of the study is presented according to two key aspects of the study:

- Human Capital Investment
- Banking Industry in South Africa

1.2.1 Human Capital Investment

Human Capital (HC) is a phenomenon that has been investigated by researchers around the world since the 1960s. As such, the definition of Human Capital (HC) varies from researcher to researcher and as a result, different concepts, models of measurement, accounting and reporting of Human Capital investment exist. Becker (1964) and Mincer (1974) describe human capital as the expense and action dedicated to recruitment, training, development, and retention of employees.

Schultz (1961) describes human capital as a single worker's knowledge, skills and abilities. He explains that human capital is the attributes that an employee brings to the job, such as intelligence, optimism, commitment, the ability to learn, such as willingness to learn, creativity and innovation, as well as the employee's enthusiasm and drive to transfer the knowledge and share information.

In this definition, human capital investment (HCI) includes the cost of recruitment, training and development, compensation, retention, and appraisal of individual employees in the organisation (Schultz 1961). Training, development and compensation constitute the majority of human capital investment (Le, Gibson and Oxley, 2003). Furthermore, the authors suggest that earnings are based on human capital that consists of abilities to

contribute to production, which is generally referred to as “skills” (Le, Gibson and Oxley, 2003). Employees in management level become more knowledgeable and practical in taking initiative and responding to customer care, resulting in increased service delivery (Abugre and Adebola, 2015). For purposes of this study, only training and development and compensation are considered to constitute HCI.

Purpose of human capital investment information

There are different users of human capital investment information for different interests. For example, managers utilize the information for decision-making and analysts and investors us it for the evaluation and probably forecasting the company’s performance. There is a gap between the relevance of value and availability of intellectual capital information (Sakakibara, Hansson, Yosano, and Kozumi 2010). Previous research also provides that in the valuation of companies, financial analysts seek to use non-financial information comprehensively.

Measurement of human capital investment

The key challenge to the HCI decision is how the organization benefits. Different authors have proposed different models of measuring human capital investment. Soboleva (2010) studied the development of the key methods to the measurement of human capital. He suggests that each method neglects some important parts of the concept that results in biases in the outcomes of statistical research. He also argues that a method to quantify an employee’s productive abilities is to be able to analyze an individual as a producer. Therefore, human capital is “an individual’s productive skills, talents, and knowledge, and that it is measured in terms of the value of goods and services produced (price x quantity)” Soboleva (2010, p45).

Moon and Kym (2006), argue that if, according to many researchers, intellectual capital (which includes human capital) drives the value of a company, and can be the most important asset of the company, that is measured by non-financial measures and other related information, it is inadequate to use the traditional double-entry accounting system only, to measure organizational value. They propose a model that should increase managers’ awareness of their intangible resources and therefore, prompt them to invest

assets in parts of intellectual capital that provides the greatest likelihood of positive organizational impact.

HCI is divided into tangible and intangible aspects, where tangible HCI constitutes the costs involved in producing the physical person including rearing costs until the age of 14 (Kendrick, 1972). This study focuses only on the intangible aspect of HCI, which is the cost of enhancing productivity of labour according to Kendrick (1972). This method gives an amount of present flow of capital invested in training and development and other HC related facets that can be useful for cost-benefit analysis. This study focuses only on the amount of training and development and compensation as a measure for HCI.

1.2.2 Banking industry

The banking industry is a part of the South African financial sector that affects all South African citizens. It facilitates job creation, the establishment of crucial infrastructure, sustainable development and economic growth for South Africans and the country. This makes it crucial that the industry is stable and properly regulated. In the contemporary South African environment, to compete and attain high performance, banks should position for growth. Stability should not be the only aim of policy for the industry. The industry needs to more transparent, competitive and economic. Furthermore, financial services are not accessible to numerous South Africans. This keeps people in poverty and hinders economic growth.

Minister Pravin Gordhan, in the “Safe Financial Sector to serve South Africa better” report by the National treasury, expressed that “With the worst of the financial crisis behind us, government will have a renewed focus on maintaining financial stability, strengthening consumer protection and ensuring that financial services are appropriate, accessible and affordable. To achieve this, the Reserve Bank will be given lead responsibility” -- *Minister Pravin Gordhan, A safer Financial Sector to serve South Africa better Report, February 2011*

The financial sector in South African context consists of the business services, real estate and finance organizations. It is the largest sector in the South African economy, contributing 21.1% of GDP, followed by the manufacturing sector that contributes 15.4%. The banking industry boasts a rigorous legal and regulatory framework, is regarded highly

internationally with a variety of local and international firms offering a variety of services, including retail and merchant banking, insurance, commercial banking, mortgage lending and investment.

The industry has constantly added to South Africa's total real growth annually, even during the years when total real growth has declined. The sector added 1.5 percentage points in 2007 and 2008 and 0.2% in 2009, even though overall growth was -1.5. South Africa is also regarded as an ideal entry into Africa and a number of global corporations established headquarters, mostly in Johannesburg. Corporations such as HSBC, Citibank, Bank of China, Deutsche Bank AG and Bank of Taiwan are represented, amongst others.

In 2011, The South African financial services industry boasted over R6 trillion in assets, adding 10.5% to GDP annually, employing 3.9 % of the employed, and adding at least 15 % of company tax.

Figure 1. The Financial Services Sector in South Africa (SARB 2011)

Table 1.1 Snapshot of the financial services sector in South Africa

	June 2000	June 2010	Relative size 2010
			Share of GDP
Size*	R68.6bn	R203.8bn	10.5 %
Assets	R 1 890bn	R 6040bn	252%
Of which:			
Banks	R 730bn	R 3040bn	127%
Long term insurers**	R 630bn	R 1440bn	60%
Short term insurers	R 50bn	R 90bn	4%
Pension funds (public and private)	R 470bn	R 1480bn	62%
			Share of formal employment
Employment***	286000	356 353	3.9 %
			Share of corporate taxes
Tax contribution+	n/a	R21 bn	15.3%

Source: SARB, Stats SA, SARS; Tax contribution is for the 2009/10 tax year.

** Size is gross value added in nominal rand of the financial intermediation and insurance component of the finance, real estate and business services sector. Estimate based on projected growth.*

*** The long-term insurer assets figure includes assets of pension funds managed by an insurance company*

**** Financial intermediation, insurance, pension funding and auxiliary services.*

+ Estimate as detailed disaggregated data is not available. The total financial services, business services and real estate and business services sector contributes R39.6bn or 29% of corporate tax. Excludes VAT and other taxes.

This study focuses on the banking industry of the financial sector within South Africa. It is the largest part of the sector that boasts R4175 billion worth of assets that sound and efficiently regulated. The system consists of a central bank (SARB), and a handful of big and financially sound banks, numerous small banks and investment institutions. It compares positively with those of developed countries. It has, consequently, enticed a lot of

foreign interest with numerous foreign banks opening in the country and others obtaining stakes in large South African banks.

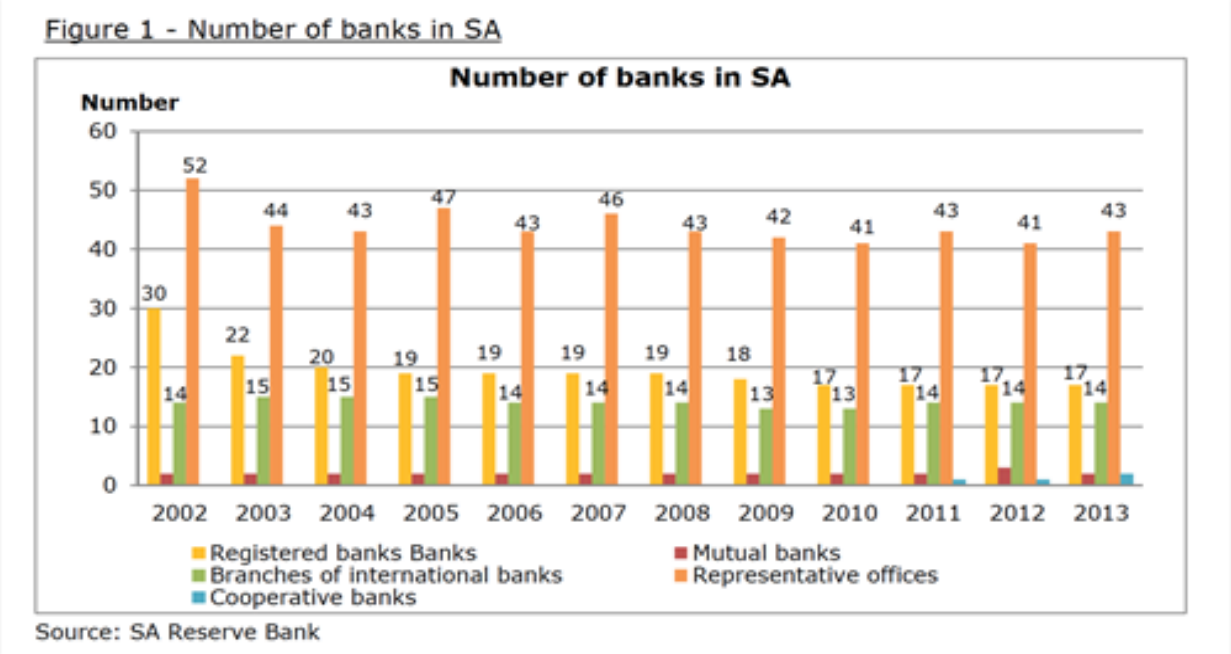
Institutions

The South African banking industry currently consists of:

- 17 registered banks;
- 2 mutual banks;
- 14 local branches of foreign banks;
- 2 co-operative banks; and
- 43 foreign banks with approved local representative offices.

A number of overseas banks and investment establishments are operating in South Africa. However, this study only focuses on the locally controlled and listed banking system, excluding the mutual and co-operative banks. The most competitive part in the industry is the investment and merchant banking industry. Whilst the local "big five" banks, Standard Bank, FNB, Absa, Nedbank and new entrant, Capitec, lead the retail market.

Figure 2. **The Banking System in South Africa (SARB 2013)**



The central bank, SARB, provides monetary policy and makes decisions on local interest rates. It also governs the banking industry, while the Financial Services Board (FSB)

governs the non-banking sector. The Banking Association of South Africa (BASA) represents all the banks, foreign and local.

This study focuses on the banks registered with the SARB that are listed on the Johannesburg Stock Exchange, excluding the mutual and co-operative banks. There are currently seven registered institutions that are listed on the JSE.

In 2012/13, South Africa was ranked second, globally, by the World Economic Forum's Global Competitiveness Report on responsibility of private organizations, and third in the development of financial market. However, the number of South Africans without access to banking services is still significant, even though the percentage of citizens with access to banks is gradually increasing. A report by Finscope 2010 established that 77 percent of adults (approximately 25 million people) have access to banking services and that 63 percent of the group make use of the services. The figure was approximately 50 percent in 2003. Retail bankers in South Africa are working to close the gap further and they offer a variety of products to draw those who previously did not have access to banking services.

Investment banking and venture capital

As previously stated, the most competitive sectors of the banking industry remain the investment and merchant banking. The sector comprises of prominent institutions such as Investec, Rand Merchant Bank (FirstRand) and Grinrod Bank.

Retail banking

The retail banking sector of the banking industry has for a long time been led by Standard Bank, Absa, FNB (FirstRand) and Nedbank, and in the later years a new entrant, Capitec, into the market grew significantly. In this sector, Absa leads in number of customers with approximately 12 million. Standard Bank comes second with approximately 10 million, and growing fast. FNB boasts approximately 7 million and Nedbank is 6 million customers. Nedbank has been developing by approximately 10% per annum, after gaining 655 000 new customers in 2012.

FNB added R2-billion to its operations in 2012/13, for growing into Africa and employing ICT professionals. On the other hand, Capitec has made strides in winning a significant piece of the retail banking market, and not only among the unbanked segment.

Unsecured lending

Unsecured micro lending was not in the focus of regulators until the catastrophic events that spread-out at the Marikana Platinum mine, North West province of South Africa in 2012, where a number of people died. An investigation by the NCR found that many miners were victims of illegal lending.

Even though the industry has seen some changes such as the decrease in mortgage lending because of the global financial crisis, slowdown of credit for furniture, progress in public service employment resulting to an increasing in middle class, companies no longer offering credit and the bringing in of the National Credit Act, which formalized the sector. The SARB's then Deputy Governor and now the Governor, Lesetja Kganyago, expressed in May 2013 that "banks were very well capitalized and that unsecured lending did not present a threat to the system". He stated that the total banking assets were R3.6 trillion in 2013, higher from R3.4 trillion in 2012, and profits from operations in 2012 equaled R49 billion. – *Source: SARB*

1.3 Problem statement

1.3.1 Main problem

The intention of this study is to assess the relationship between human capital investment and the financial performance of a bank.

1.3.1.1 Sub-problem 1

The first sub-problem is to evaluate and analyze the relationship between the cost of training and development and bank's financial performance.

1.3.1.2 Sub-problem 2

The second sub-problem is to evaluate and analyze the relationship between average salary spend to a bank's financial performance.

1.4 Significance of the study

Substantial research has been conducted in the study of human capital investment from different perspective, such as an economic study of human capital's impact on economic factors such as unemployment and economic growth. Some studies focused on HCI from an individual (employee)'s perspective, and others from the firm's perspectives and both.

This study was conducted from the firm's perspective, to understand the relationship between investment on human capital and the firm's financial performance. Wyatt and Frick (2010), state that human capital investment play a key role in the companies' and industries' outputs, given a set of inputs (productivity). They also argue that "evidence suggests human capital investment decisions are intrinsically linked to the success of a business and ultimately to the probability of survival" (Wyatt and Frick 2010, p199). The question that remains is what the sufficient or adequate amount of investment in human capital is, raising the importance of management's consideration of under and over-investment in human capital and the effects thereof. Weiland and Flavel (2015) suggest that overinvestment in human capital has the potential to hinder value creation for companies. Under-investment can potentially hinder the ability to enhance capabilities for growth (Chang and Wang, 1996). Furthermore, HCI has both consumption and investment effects (Chang and Wang, 1996). This means that HCI can be for satisfying user preferences as well as for enhancing productivity.

Research suggests that management voluntarily disclose in their reporting information related to human capital investment. Moon and Kym (2006) argue that from the perspective of capital markets, there are growing signs that intellectual capital-intensive stocks might not be adequately priced by the market, due to the limited use of human capital measures in company valuations. This supports the growing importance of human capital investment and the disclosure of information related to the investment. Wyatt and Frick (2010) also expressed that "equity markets appear to recognize the value in human capital investments, even though accounting standards do not provide systematic accounting for this investment" (Wyatt and Frick, 2010, p214). Therefore, the question of the level of reliability and relevance of valuations and allocation of resources is more pertinent and complete financial information and non-financial is provided to analysts and investors.

“The benefits of disclosing the data related to human capital investments are expected to outweigh the cost”, says Wyatt and Frick (2010, p199). Due to the absence of information associated with human capital investments and the returns, organizations sometimes make the judgment error of cutting down on human capital when the company is distressed. This is due to lack of information on how much more it will cost to replace the human capital, what impact the cutting of human capital will be on the company’s performance. One can then argue that Human capital investment information is also valuable for decision making by management, as well as analysts and investors.

A number of questions arise, such as whether the way of reporting under GAAP and the voluntary disclosure allows interested parties to assess the proficiency of the company’s investment on human capital activities. What is the demand for Human Capital investment related information by stakeholders? Can there be settings of the types of information relating to human capital, such as company valuation models, that can be provided to evaluate expenditure and rewards for firms and stakeholders? Can we identify the type of information that would be useful to stakeholders, such as investors and management? Do stakeholders use the human capital investment information to evaluate the risks and performance prospects of the organization?

Previous studies concluded that there is a wide range of rewards from the broadcasting of human capital investment information, with a few disadvantages of disclosure. Flamholtz, Bullen, and Hua (2002), suggests that if accounting for human capital can reveal that enhancement of human capital increases profits, management will include human capital consequences in their decision making process more. This could also provide analysts and investors enhanced ability to make a better judgment on the ability of management to make decisions for future growth.

Traditional accounting‘s conservatism has made it difficult for investors to compare HCI in a firm, further explains Flamholtz, Bullen, and Hua (2002). This study may also provide guidance on the impact of HCI on the company’s share price, looking at the risks associated with HCI. This is mainly due to the subjectivity in measuring human Capital, because, amongst other reasons is that the firm does not own human capital.

With human resource, accounting study that has been conducted on the measuring, monitoring and quantifying the cost and value of HCI. This study was envisioned to study

the relationship between HCI and the company's financial performance, to provide management with much needed information on the relationship of HCI and company financial performance for management to use in the decision making process of HCI. It will also provide analysts and investors enhanced ability to make better judgment on management's ability to make decisions for future growth, as well as guidance on the impact that a higher or lower HCI could have on the company's forecast of future growth (inflows).

1.5 Delimitations of the study

This study focused on training and development and compensation components of human capital investment in the registered and JSE listed banks within the banking industry in South Africa.

1.6 Definition of terms

Definitions and abbreviations used in this report and that need to be understood are provided in table below:

Human Capital – is the attributes that an employee brings to the job, such as intelligence, optimism, commitment, the ability to learn, such as willingness to learn, creativity and innovation and the employee's enthusiasm and drive to transfer the knowledge and share information (Theodore Schultz 1961).

Human Capital Investment (HCI) - is the method organisations apply to advance employees' skills and competencies. In this definition, human capital investment includes the cost of recruitment, training and development, compensation, retention, and appraisal of individual employees in the organisation (Schultz 1961).

Financial services market - consists of the business services, real estate and finance organizations

Financial analysts – are defined in the financial services industry as an employee of a brokerage, mutual fund, bank or advisor, who assesses companies and provide purchase and sell recommendations (Sakakibara, Hansson and Kozumi 2010).

Intellectual capital – is “the sum of all knowledge and knowing capabilities that can be utilized to give a company a competitive advantage” (Youndt, Subramanian and Snell 2004, p337)

Social capital – involves the utilization of human capital to build relationships within and outside the organisation (Youndt, Subramanian and Snell 2004).

Organizational capital – is a process when a substantial percentage of the knowledge people create through human capital shared through social capital is entrenched in the business policies and procedures, databases and information systems (Youndt, Subramanian and Snell 2004).

1.7 Assumptions

In this study, the follow assumptions have been made:

- Training and development includes formal education and formal and informal training in general, industry specific and firm/task specific skills and competency development.
- Banking industry is an intellectual capital-intensive industry.

CHAPTER 2: LITERATURE REVIEW

2.1 Definition

The theory of human capital focuses on answering three main questions. Substantial research has been conducted in order to answer the “What”, “Why” and “How” questions on information related to human capital. Wyatt and Frick (2010), for example, provide an outline of notions and observations from the study of human capital that relates to these questions. What is human capital, what are the benefits and impediments to allocate resources to human capital and what are the benefits and impediments to account for human capital investment?

Researchers around the world have investigated Human Capital since the 1960s. As such, the definition of Human Capital varies, as a result different concepts, models of measurement, accounting and reporting of Human Capital investment exists. For the purpose of this study the definition of human capital that has been adopted is the talents that a worker brings to the job, such as positive attitude, acumen, commitment, the readiness and ability to learn, innovation and the employee’s eagerness and determination to share the knowledge and transfer it (Schultz, 1961). This definition includes the selection, training and development, compensation, retention, and appraisal of individual employees in the organisation.

Many researchers agree that human capital that is provided by individual employees is vital for company performance, because it can be used to give an organisation competitive advantage and to sustain a strong economy. Even though researchers agree that Human Capital is an important dimension of an organisation’s intellectual capital, different arguments on other dimensions have been posed. Youndt, Subramaniam and Snell (2004) investigate the coexistence of human capital, social capital and organisational capital to create an Intellectual capital profile.

Youndt, Subramanian and Snell (2004), argue that Human Capital investment should not be looked at in its one-dimensional form. They found that Human Capital investment is one element to the amount of Intellectual Capital. They argue that, although, Investment in Human Capital, such as training and development, has benefits for the employee and

employer, the knowledge is embedded in the individual that the organisation cannot own. Only when the knowledge and skills acquired by the individual is applied in the organisation and transferred does it yield a benefit for the organisation (Youndt, Subramanian and Snell, 2004). They further explain that when Human capital is utilised to build relationships within and outside the organisation, social capital is built. Then in due course, a significant portion of the knowledge individuals create through human capital is spread through Social Capital is embedded and entrenched in the organisational policies and procedures, databases and information systems, turning into Organisational Capital.

Thus, they adopted an approach that Human Capital, with social capital and organisational capital form intellectual capital. While Human Capital basically means individual employee's knowledge, skills and abilities (Becker, 1964; Schultz, 1961), they do acknowledge that Human Capital is the primary element of intellectual capital, simply because it drives social and organisational capital. The enhancement of a company's knowledge base is seen to be a transformational process founded on the strategic investment decisions that not only direct, but also restrain, what the design of social, structural and human capital will arise (Becker, 1964; Schultz, 1961).

Youndt, Subramanian and Snell (2004), support an argument that very few organisations came into existence and sustained without an appropriate level of intellectual capital, because they found that low intellectual capital profile organisations showed the worst performance in both financial returns and Tobin's Q.

The authors further state that human capital does not establish and build itself up, it is a strategic investment that management makes in building the knowledgebase of the organisation (Youndt, Subramanian and Snell 2004). They also argue that companies with high intellectual capital through high human capital and social capital exhibited higher levels of human capital investment.

2.2 Benefits of human capital investment

Youndt, Subramanian and Snell (2004), explains that human, social and organizational capital together form intellectual capital that is unique to the organization, and therefore become a form of competitive advantage. Becker (1964) and Schultz (1961) who explains

that the primary component of intellectual capital is human capital, simply because it develops social and organizational capital, support this notion.

The concept of human capital boils down to three questions, which are important to answer in research. We need to ask “What”, “Why” and “How” questions on information related to human capital. Wyatt and Frick (2010), provide a summary of theories and outcomes from the human capital literature that are twofold. What are the benefits and disadvantages to finance human capital and what are the benefits and disadvantages to account for human capital financing? The purpose of their study was to give a summary of what has been researched and is known about the role of human capital investment within firms’ production function. They also studied the foundation and the attributes of the demand for information on human capital investment. The authors attempt to answer the question of why Human Capital investment is of interest. The purpose of this study is to evaluate and analyze the relationship between the cost of training and development and salaries to company’s financial performance

Wyatt and Frick (2010), state that the main reason is the key part that the human capital investment plays in the companies’ and industries’ output given a set of inputs (productivity). “Human capital investment decisions are intrinsically linked to the success of a business and ultimately to the probability of survival” (Wyatt and Frick, 2010, p199). Training, development, and compensation constitute the majority of human capital investment (Le, Gibson and Oxley, 2003). Earnings are based on human capital that consists of abilities to contribute to production, which is generally referred to as “skills” (Le, Gibson and Oxley, 2003). Weiland and Flavel (2015) argue that the relationship between employee related activities and financial performance depends on the measures selected for performance. Employees in management level become more knowledgeable and practical in taking initiative and responding to customer care, resulting in increased service delivery (Abugre and Adebola, 2015). For purposes of this study, only training, development and compensation are considered to constitute HCI.

Sub-problem 1

The first sub-problem is to evaluate and analyze the relationship between the cost of training and development and a bank’s financial performance.

Wyatt and Frick (2010), adopted Goode (1959)'s definition of Human Capital, and thus conceptualised Human Capital as a flow of investment (Input) in recruiting, retaining, training and development, and compensating individual employees, as well as the human resources that are acquired through mergers and acquisitions and contracts, from which the company get output. This concept illustrates that a portion of the output resides in employees and the other portion resides in the organisations policies, procedures, systems, products, intellectual property and databases. They found this concept to be mutually beneficial to the individual employee through increased earnings and the firm through increased performance.

They explain that the key challenge to human capital investment decision is how the organisation benefits. Investment in general training and development is more beneficial to the employee and not much to the organisation (Wyatt and Frick 2010). However, training and development that is firm specific and task specific is more beneficial to the company than to the individual employee. Therefore, two parties invest in human capital based on the returns of investment. The individual employee is more likely to fund general training and development, whilst the company will invest in firm or industry specific training and development and task-specific training and development. The benefits of human capital investment can last long, depending on the length of the worker's service (Wyatt and Frick 2010). HCI is important for the sustainability of the organisation and its performance (Milost, 2013). A significant relationship exists between training and development of middle management and business performance (Abugre and Adebola, 2015).

What has changed over the recent years is that management voluntarily disclose in their reporting information related to human capital investment (Dean, McKenna and Krishna, 2012). This supports the growing importance of human capital investment and the disclosure of information related to the investment (Mkumbuzi, 2015). Dean, McKenna and Krishna (2012) suggest that equity markets somewhat seem to acknowledge the value in human capital investments, although accounting standards do not provide systematic accounting for this investment. Therefore, the question of the level of reliability and relevance of valuations and resource distributions arises, if relevant and broad non-financial and financial information is not provided to analysts and investors.

Dean, McKenna and Krishna (2012) found that returns of disclosing information related to human capital investments are expected to outweigh the cost. Due to the lack of

information related to human capital investments and the returns therefore, organisations sometimes make the judgement error of cutting down on human capital when the company is distressed (Mkumbuzi, 2015). This is due to lack of information on how much more it will cost to replace the human capital and what the impact of cutting on human capital will be on the company's performance. One can then argue that Human capital investment information is also useful for decision making by management (Mkumbuzi, 2015).

The examination and findings in this paper leads to a number of questions according to the authors. It leads to the question of whether the way of reporting under GAAP and the voluntary disclosure allows interested parties to evaluate the efficiency of the company's human capital investment practices. What is the demand for Human Capital investment related information by stakeholders? Can there be settings of the types of information relating to human capital that can be provided to evaluate the disadvantages and advantages for companies and stakeholders. Can we identify the type of information that would be useful to stakeholders, such as investors and management? Do stakeholders use the information connecting to human capital investment to evaluate the risks and performance prospects of the organisation (Mkumbuzi, 2015).

Researchers such as Dean, McKenna and Krishna (2012), Mkumbuzi (2015) and Abhayawansa and Azim (2014) concluded that there are different reasons and benefits from the reporting of intellectual, with a little disadvantages of disclosure.

Sub-problem 2

The second sub-problem is to evaluate and analyze the relationship between average salary spend and a bank's financial performance.

2.3 Measurement of Human Capital Investment

Different authors have proposed different models of measuring intellectual capital, such as Soboleva (2010) whose study examines *"the evolution of the main approaches to the measurement of human capital. It shows that each approach disregards some important aspects of the phenomenon, which leads to biases in the results of statistical research"* (Soboleva, 2010, p43). Soboleva (2010) defines human capital as a cause of new concepts, designs and inventions, and as an element that facilitates their acceptance and distributing.

In closer examination, the author has found that econometric models do not reflect a substantial correlation between human capital and growth. Thus believe the explanation to be the imperfect measurement of human capital.

Based on the definition, the author believes that a method to measure and quantify an employee's productive abilities, to be able to analyse an individual as a producer. Therefore, Soboleva defines human capital as an employee's productive skills, talents, and knowledge, and that it is determined in terms of the value of goods and services produced (price x quantity) (Soboleva 2010). He likens the human capital to physical capital, in that physical capital is produced by making changes in material to make tools that helps production. Human capital is made by changing individual employees to give them the skills and capabilities that enable them to act in new ways (Soboleva 2010).

The author explains that costs associated with human capital should not only be narrowed down to knowledge, skills and abilities acquired in a formal education system. They should also consider the different forms of human capital investment such as on the job training, medical care, and other costs that are related to improving the employees' satisfaction and positive attitude (Soboleva 2010). He argues that the measurement should also include indirect cost of increasing the economic return of human capital through its better realisation and market factors.

In this article, Soboleva (2010) explains that one method is measuring human capital based historical efforts, which includes the most productive part of human capital theory, which relates to investment. He further explains that to apply this method, it is key to identify and measure accurately what expenses at employee, company and macro level should be considered investment in human capital (Soboleva 2010).

The other approach is the one that classifies all other expenses as consumption, removing only the expenses that increase people's productive capacities, as investment. Both these approaches are based on the future flow of benefits, which relies on that income reflects a worker's productivity (Soboleva 2010).

Moon and Kym (2006), the authors suggest a model of intellectual capital that includes human capital, structured capital and relational capital, with sub factors and measurement indicators. They explain that their model is a useful tool to management for evaluating different perspectives of their organisation's intellectual capital. They argue that if according to many researchers, intellectual capital drives the value of a company, and can

be the most important asset of the company, that is measured by non-financial measures and other related information, it is inadequate to use the traditional double-bookkeeping accounting system only, to measure organisational value. They further explain that this new resource-based perspective of competitive advantage challenges the importance that Porter (1980) placed on environmental drivers. According to this perspective, the internal resources of a company are taken as the key assets that can build competitive advantage (Moon and Kym, 2006).

The purpose of the study by Moon and Kym (2006) was to provide an answer for the "What" in defining and classifying intellectual capital for the "How" measurement question. The authors built and examined a model that consisted of 3 dimensions: Human, Relational and Structural Capital, which have ten sub factors and 35 indicators that were supported empirically. They argue that management can use this model to monitor the strengths and weaknesses of intellectual capital. Then utilise the weaknesses identified to make decisions for human, relational and structural capital investment (Moon and Kym 2006). The model intention of the model was to enhance managers' awareness of intangible assets and encourage them to invest resources in the elements of intellectual capital that hold the greatest potential for positive organisational impact (Moon and Kym, 2006).

There are different users of human capital information for different interest. For example, managers utilise the information for decision making and investors use it for the evaluation and probably forecasting the company's performance. The article by Sakakibara, Hansson, Yosano, and Kozumi (2010), is based on a study of financial analysts' perception of intellectual capital information and its relations to the evaluation of firms. This study shows how there's a gap between the value relevance of and access to intellectual (including human) capital information. Sakakibara, Hansson, Yosano, and Kozumi (2010) explained that studies by other researchers suggest that in the valuation of companies, financial analysts use non-financial information comprehensively.

The question becomes how easily accessible is the information, for investors to more efficiently evaluate resource allocation in the capital market, and for analysis to use in their valuation of companies. Sakakibara, Hansson, Yosano, and Kozumi (2010) explain the limit to access information hinders the use of intellectual capital by analysts in their valuation of corporations, mostly in the use of human capital measures.

It is important to standardise and regulate the measurement and disclosure of the intangible assets, through accounting standards to be meaningful and allow for comparison. Sakakibara, Hansson, Yosano, and Kozumi (2010) conducted a survey of the financial analysts' perception of information related to intellectual capital in organisations. The study found that the sum of information regarding firms tends to be correlated with the size of the firm. Information for large firms tends to be more accessible than that of smaller size firms. The study also found that the value relevance (information related to performance) of non-financial information is different in large companies compared to small companies. For small companies, 4 out of 5 human capital measures are in the top ten value relevant intellectual (including human) capital measures. Whilst in the case of large firm, only 2 out of the 5 human capital measures are value relevant. Analysts tend to use more social and relational capital measures to evaluate intellectual capital in their valuation of large companies, and use more human capital measures in the valuation of small companies. This could indicate that when measuring and disclosing intellectual capital information is important to disseminate the measures that are value relevant based on the size and the industry of the firm.

What is more interesting in this article is that the authors found that there is a difference in use of human capital among experienced and inexperienced analysts. The article explains that more experienced analysts use human capital-based measures in their evaluation more than inexperienced analysts. This can show that information on these measures are hard to find and/or takes a certain level of experience and relations with company management to be able to attain and understand how this information is related to the firm's performance. The authors further state that analysts of mature industries tend to use employee satisfaction which is a human capital measure, for valuing larger firms, to a large extent. However, they have found that there is no difference in views of experienced and inexperienced analysts in the requirement for standardised measurement and disclosure.

The authors conclude that "analysis perceive most non-financial measures to be value relevant, and that the value relevance is generally stronger for small firms than large firms". Human capital information appears to be more available in small companies, whilst relational and social capital information is more accessible in larger companies. The inaccessibility of non-financial information limits the financial analysts' use of this information in their valuation of companies.

Furthermore, analysts regard human capital factors as vital for company performance, and are more favourable towards standardisation of measures and disclosure procedures.

Most general methods of selecting a project place emphasis on the basis of returns. Intellectual capital information, specifically human capital measures, can also be used for evaluation and selection of projects. Daniels and Noordhuis (2005) explained that “in many cases other strategic factors are important, such as innovation capacity, development of best practices and customer satisfaction” (Daniels and Noordhuis 2005, p27). The authors argue that management are faced with the challenge of having to manage their sources of competitiveness effectively. In the current environment of knowledge, the sources of competitiveness are more dependent on the knowledge, and capabilities of employees (human capital), the relationships with stakeholders, trademarks, patents etc. The individual employees with the knowledge and capabilities play a very important role in the dimensions of intellectual capital, because they are the knowledge providers and value creators. This increases the need for management to align targets set by strategies to human capital investment. This indicates that when making selection of strategic projects that enable the firm to achieve goals, management increasingly need to understand the causal relationship of these projects and actual goals for the firm.

The aim of the model built by Daniels and Noordhuis (2005) begins from the elements of intellectual capital that should be used effectively and efficiently to achieve set goals of the firm. They agree with other researchers that intellectual capital has the human capital that leaves the company at some point, and the structural capital remains. They also agree with the investment in human capital to disseminate and develop social or relational and structural capital.

Whilst the focus of my topic and literature review is to investigate the extent to which the “why” question of measuring and disclosing human capital and distribution of its information for the use by stakeholders. This question can potentially answer the “who” question of the use of human capital related information.

It appears that the concept of Human Capital, even though much research can still be done, has been a concept of interest for researchers. Researchers do not generally disagree on the definition and concept of human capital, even though there are differences in the methods and models of measurement of human capital.

2.4 Conclusion

There are a number of factors of human capital that researchers generally agree on. That human capital investments are embedded in the individual employees cannot be possessed by firms and can leave at any time. But benefits, that can be long-lived, are realised when human capital is shared and used to build relationship (social or relational capital) inside and outside the organisation, and codified and institutionalised (structural capital) in the organisation through policies and procedures, systems, database and routines. This intellectual capital is then utilised by the organisation as a source for competitive advantage.

As such, for the purpose of this study, the definition of human capital is an individual employee's knowledge, skills and abilities (Becker, 1964). In this definition, human capital investment includes the cost of recruitment, training and development, compensation, retention, and appraisal of individual employees in the organisation (Schultz 1961). This study will focus on investment on human capital as the cost of training and development that improves the knowledge, skills and abilities of employees, as well as average salary (compensation) for employees that contributes to motivating and retaining employees (Weiland and Flavel, 2015).

Research suggests that investment in general training and development is more beneficial to the employee and not much to the organization. However, training and development that is firm specific and task specific is more beneficial to the company than to the individual employee (Wyatt and Frick 2010). Therefore, two parties invest in human capital based on the returns of investment. The individual employee is more likely to fund general training and development, whilst the company will invest in firm or industry specific training and development and task-specific training and development. The authors also found that the rewards of investing in human capital can last for a long period of time, provided the employee's service is also extended period and the extent to which human capital is translated to social and organizational capital.

It is evident from the literature review that researchers are inconclusive on the definition and measurement of human capital investment. However, they seem to agree that human capital plays a key role in building sustainable competitive advantage and increasing productivity (outcome) in a firm. They also agree that there is a positive correlation between intellectual capital and the performance of companies, in terms of accounting methods and

Tobin's Q method. Human capital investment is considered from two perspectives, from the employer point of view, and from the employee point of view. This is study considers human capital investment from the employer point of view.

2.4.1 Research Question 1

The first Research Question is to evaluate and analyze the impact of the cost of training and development on a bank's financial performance.

Wyatt and Frick (2010) and Flamholtz, Bullen, and Hua (2002), provide that human capital is vital for a company's performance and to sustain a strong economy. Investment on human capital is the cost of training and development that improves the knowledge, skills and abilities of employees, as well as average salary (compensation) for employees that contributes to motivating and retaining employees (Weiland and Flavel, 2015).

Hypothesis 1 – Training and development spend per capita has a positive correlation to revenue (interest and non-interest (fees) revenue) of a bank

Interest income is the revenue generated through interest-bearing assets such as outstanding loans that have been extended to customers and investment securities. Interest expense is the cost of servicing interest-bearing liabilities of the banks. Interest income is the primary source of revenue. Abugre and Adebola (2015) suggest that a strong relationship exists between training and development of middle managers and their performance and a result the company's performance. Managers become more knowledgeable and practical in taking initiative, innovation and responding to customer needs, resulting in improved delivery of products and services. Net interest income considers the difference between interest income and interest expense, which is the biggest driver of revenue and profitability, for the specific period.

Hypothesis 2 – Training and development spend per capita has a positive impact on net interest income of a bank

When the knowledge and skills acquired by the individual is applied in the organisation and transferred, it yields a benefit for the organisation (Youndt, Subramanian and Snell, 2004). The work of researchers, such as Becker (1962), Chang and Wang (1996) and Youndt,

Subramanian and Snell (2004), has showed the relevance of HCI to employees' productivity, employee turnover, basis for compensation and other employee related aspects. Chang and Wang (1996) suggest that an employee's productivity is dependent on the level of HCI and quality of work match. They argue that training and development at a certain level enhances an employee's productivity by the same level in the near future.

Hypothesis 3 – Training and development spend per capita has a positive impact on Net Operating Profit of a bank

The question that remains is what the sufficient or adequate amount of investment in human capital is, raising the importance of management's consideration of under and over-investment in human capital and the effects thereof. Weiland and Flavel (2015) suggest that overinvestment in human capital has the potential to hinder value creation for companies. Under-investment can potentially hinder the ability to enhance capabilities for growth (Chang and Wang, 1996). Furthermore, HCI has both consumption and investment effects. This means that HCI can be for satisfying user preferences as well as for enhancing productivity. However, the trade-off and traditional human relations theories propose that employee related activities including training and development and compensation have a negative impact on financial performance (Weiland and Flavel, 2015). This is based on the view that training and development and salaries are seen as costs that hinder value creation.

Hypothesis 4 – Training and development spend per capita has a positive impact on return on assets (ROA) of a bank

Wyatt and Frick (2010) emphasises the role that human capital investment plays in the companies' and industries' output given a set of inputs (productivity). They provide that "evidence suggests that human capital investment decisions are intrinsically linked to the success of a business and ultimately to the probability of survival" (Wyatt and Frick 2010, p199). This notion is also supported by Weiland and Flavel (2015) who suggest that employee orientated activities, such as training and development and compensation, have a positive effect on financial performance of companies. They liken this notion to the slack resource theory that proposes that companies that perform well financially have more resources to invest in human capital related activities, and therefore suggesting a reciprocal relationship.

Hypothesis 5 – Training and development spend per capita has a positive impact on return on equity (ROE) of a bank

In observing the annual reports for all banks included in this study, it was identified that the banks consistently use the Cost to Income ratio as one of the financial performance indicators and highlighted in reporting. Weiland and Flavel, (2015) suggest that training and development and salaries are seen as costs that hinder value creation.

Hypothesis 6 – Training and development spend per capita has a negative impact on Cost to income ratio of a bank

2.4.2 Research Question 2

The second Research Question is to evaluate and analyze the impact of average salary spend on a bank's financial performance.

Hypothesis 7 – Average salary spend has a positive correlation to revenue (interest and non-interest (fees) revenue) of a bank

Hypothesis 8 – Average salary spend has a positive impact on net interest income of a bank

Hypothesis 9 – Average salary spend has a positive impact on Net Operating Profit of a bank

Hypothesis 10 – Average salary spend has a positive impact on return on assets (ROA) of a bank

Hypothesis 11 – Average salary spend has a positive impact on return on equity (ROE) of a bank

Hypothesis 12 – Average salary spend has a negative impact on Cost to income ratio of a bank

CHAPTER 3: RESEARCH METHODOLOGY

The aim of this study is to respond to the following Research Questions:

- to evaluate the relationship between training and development spend and a bank's financial performance; and
- to evaluate the relationship between salary spend and a bank's financial performance.

Even though considerable studies have been done in this field, a substantial amount of these studies have been conducted abroad on greater data sets. This study was conducted on 70% of the total universe of current South African registered and JSE listed banks. Because there is broad body of research on human capital investment, a quantitative rather than a qualitative approach seems appropriate.

The methodology used to execute the research assignment is discussed in this chapter. The initial section discusses quantitative survey-based research and its relevance for this assignment. Then the following topics are discussed:

- research design
- population and sample
- limitations of the study

3.1 Research Methodology

The research was conducted using a quantitative methodology, which is formal, unbiased, organized process where numerical data is used to gather information about a phenomenon (Bridges, Gillmore, Pershing and Bates 1998). Kamil (2004) describes the methodology as placing focus on measuring and counting. This research technique is appropriate because it is used to describe variables, observe relationships between variables and identify cause-and-effect relations between variables (Kamil, 2004). This study follows the similar approach that Weiland and Flavel (2015) conducted in their study of the relationship between employee orientation, financial performance and leverage. In their study, Weiland and Flavel conducted a correlational analysis to study the relationship between employee orientation and financial performance, as well as leverage. The authors described employee

orientation as activities undertaken by companies in the interest of employees. They included activities such as further education, flexible working hours, compensation and other benefits. They performed this study on a sample of companies rated as “top employers Germany” for the period 2007 to 2011.

3.2 Research design

As such, the quantitative research study used information provided in the different banks’ Annual Reports and sustainability reports and human capital information gathered from the Banks’ human resources management departments on either their entire organisation or their specific area of the organisation (Line of Business). Key pieces of financial performance related information was gathered from annual integrated reports of the banks from 2003 to 2014, representing a 11-year period of data. The data was then presented in numerical form and analysed using statistics.

A quantitative correlational analysis that intended to systematically examine and describe the nature of the relationship between human capital investment and specified financial performance indicators of the selected banks over the years starting 2003 to 2014. This period represented 10 years of performance periods.

A correlation analysis was conducted on training and development spend and average salary spend of year *n* and the selected financial performance indicators of year *n+1,* thus creating a one-year time lag in the variables*.* This stepped analysis was aimed at testing whether financial performance for the year *n* was associated with investment in human capital in year *n-1.* The aim of applying correlations in this study was to understand which variables are connected or associated (Mahoney, 2001). The author explains that, in correlation, when one variable increases, the other will react by either going up, known as a positive correlation, or going down, known as a negative correlation.

A cross-correlation analysis was further performed on financial performance and human capital investment. This analysis was intended to test whether human capital investment in year *n+1* was associated with a financial performance in year *n*.

The definition described above is the foundation of some statistical tests that end in a correlation coefficient, which is a statistical representation of the extent or strength and direction of a relationship (Mahoney, 2001). Weiland and Flavel (2015) suggest a reciprocal

relationship between employee related activities and financial performance. A lead lag analysis on the variables was conducted to cross-correlate human capital investment (leading) variables with financial performance (lagging) variables.

3.3 Population and sample

3.3.1 Population

There are currently Seven SARB registered banks that are listed on the Johannesburg Stock Exchange. These are ABSA Group (Barclays Africa), Capitec Bank Holdings Limited, FirstRand Bank Limited, Grinrod Bank, Nedbank Limited, Standard Bank South Africa and Investec Bank Limited.

3.3.2 Sample and sampling method

The sample that will be tested for this study comprises:

- ABSA Group (Barclays Africa);
- FirstRand Bank Limited;
- Nedbank Limited;
- Standard Bank South Africa; and
- Investec Bank Limited.

They constitute just over 70% of the South African banking industry. This study is, therefore, conducted on eighty percent (80%) of South Africa's top 5 banks, which constitutes the majority of the industry, and included the only medium sized bank in the population.

Capitec Bank, now a big five bank, during the period which this research is studying, grew astoundingly rapidly from a micro lending business to be one of the big banks in South Africa. As a result, the bank has been excluded from the study. Grinrod Bank is largely a logistics company, and their banking operation is small and does not have much presence in the banking industry. Accordingly it was also excluded.

3.4 Research Instrument

All data was sourced from the bank's annual and integrated reports that are available on their websites and investor relations offices for period starting 2003 to 2014. Secondary data on the banks was collected from their financial and integrated reports, investor relations offices and, where necessary, industry data was collected from the SARB Bank supervision department, Statistics South Africa and the South African National Treasury.

Financial statements analysis measures (figures, ratios and margins) and performance indicators were used as financial performance indicators. Altman explains "In general, ratios measuring profitability, liquidity, and solvency prevailed as the most significant indicators of financial performance" (Altman 1968, p590). To meet the purpose of this study the following variables were calculated and used:

Human capital investment variables

- **Training and development Spend per capita** – is the expenditure for training and development of the organisation for the period under review. It is measured by dividing total training and development spend by the number of employees for the specific period.
- **Average salary spend** – is the aggregated salary spend divided by the total number of employees for the specific period.

Financial performance variables

- **Revenue** – this variable includes interest and non-interest (fee and commission) income. Interest income considers the income generated by interests on a bank's assets, predominantly loans, for the specific period. Fee and commission income considers income generated partly by services charges on deposit accounts, but mostly come from off balance sheet activities, which generate fees for the bank for the specific period. Fees and commission income is generated from operations.
- **Net interest**– this variable considers the difference between interest income and interest expense, which is the biggest driver of revenue and profitability, for the specific period.
- **Net Operating Income (Net Profit)** – this variable considers the difference between operating income and operating expense, for the specific period, after tax.

- **Return on Assets (ROA)** – this variable considers how well the bank's assets are utilised to generate profits for specific period. It divides net operating income by assets.
- **Return on Equity (ROE)** – this variable considers the amount that a bank is earning for the shareholders' equity investment for the specific period.

The ROA is a basic measure of profitability that takes into consideration the size of the organisation, whilst the ROE takes into consideration investors' interests.

The benefits of using secondary data include that data already exists, it is less costly and the researcher is not personally responsible for the quality of data. However, shortcomings include that the researcher cannot decide what is collected, can only assume or hope the data is of good quality and obtaining further data about something might not possible.

3.5 Data analysis and interpretation

"The detection of company operating and financial difficulties is a subject which has been particularly subject to financial ratio analysis" says Altman (1968, p590). The procedures that will be followed to analyse the data utilised in this research is discussed below.

Formation of population

The participants of the population were acquired from the SARB for South Africa's big banks and JSE data for listing based on the first day of trading in January of the year 2015. There were seven (7) SARB registered banks that are listed on the Johannesburg Stock Exchange at the time of acquiring the population. The seven banks found included the five big, one medium and one small bank that constitute approximately 80% of South African banking industry assets, with the remaining banking assets being held by unlisted or foreign banks.

Calculation of HCI and financial performance indicators

The following calculations were conducted to derive the dependent and independent variables from the financial statements for a 10-year period for each member of the population.

Human capital investment variables:

Training and development Spend per capita = expenditure for training and development
total number of employees

Average salaries spend = aggregated salaries spend
total number of employees

Financial performance variables:

Revenue = aggregate income generated by interests on a bank's assets, predominantly loans (Interest Income) + aggregate income generated by services charges + balance sheet activities (Fees and commission)

Net interest = interest income - interest expense

Net Operating Income = operating income - operating expense - tax expense

Return on assets (ROA) = net operating income
average assets.

Return on equity (ROE) = net operating income
average shareholders' equity

Cost to income ratio = Total Operating costs
Total income

This analysis examined variables that seem to interrelate, so that when a change is seen on one, you have an idea of how much change in the other. More frequently than not, the study involved applying variables that could not be controlled (Mahoney, 2001).

3.6 Limitations of the study

- Focuses only on training and development and salary spend as human capital investment.
- Interference in a correlation by variables that could influence the study (Extraneous variable).

- A perfect correlation rarely occurs, meaning that concurrent and equal changes are rarely seen when a variable is changed.
- Correlation is not the same as causation, meaning that the variables are simply interacting with each other. They might not necessarily cause one another (Mahoney, 2001).
- Correlations do not specify direction of interaction, meaning it does not state how variable X and variable Y interact, only that they do interact (Mahoney, 2001).
- Inflation has also not been taken into consideration as the inflation has remained fairly stable over the period. Inflation in South Africa has been within the same range of between 4 to 7% for the period under review, therefore the difference in the correlation results is insignificant. The following table provides an overview of inflation rate:

Table1: Overview of inflation rate

Period	CPI Index	Inflation
2009	85	7.1
2010	88	4.3
2011	93	5.0
2012	98	5.7
2013	103	5.8
2014	110	6.1

Source: The National Treasury of South Africa: Economic Policy

3.7 Validity and reliability

Quantitative research validity deals with the extent to which the means of measurement are correct and they quantify what they are intended to measure (Golafshani, 2003). It frequently concerns issues such as objectivity, replicability controllability, ability to generalize and predictability. Reliability deals with the extent to which the outcomes can be repeated. Reliability in quantitative studies concerns issues such as stability, correctness, similarity, replicability, consensus, descriptive and causal potential (Creswell, 2003).

3.7.1 External validity

External validity is the extent to which the deductions in this study can be generalised to other persons/populations in other places and at other times (Creswell, 2003). This study tested 70% of the population that was formed from registered and JSE listed banks as per the South African Reserve Bank and the JSE. The population holds over 70% of market share in the banking industry in South Africa, and performing the analysis (replicating) 5 times for each of period of study makes it possible to generalise the results to the rest of registered banks at the SARB and foreign banks with operations in South African Banking Industry.

Validity was maximised by being aware of validity and reliability issues, and taking measures throughout the stages of this study, such as picking fitting methodology. Annual and integrated reports and investor relations of the banks were used collect all the data. Relevant financial statement items such as revenue, net profit after tax, salary expense, total assets and ordinary shareholders' equity are uniformly reported on the banks annual reports as required by accounting standards and legislation. There is no legislative requirement for presenting and reporting Human Capital information, however some of the banks provided this information on their integrated (sustainability) reports. For those that the information was not provided, the data was collected from their investor relations offices. No challenges were experienced in acquiring information from investor relations of all the banks. Due care was also taken to ensure consistent procedures for collecting data and avoiding utilising data selectively and unrepresentatively (Creswell, 2003). Traditional financial statement analysis ratios were calculated and used to analyse variable.

3.7.2 Internal validity

Internal validity is the estimated certainty about suggestions concerning causal relationships (Trochim, 2006). Therefore, it is only appropriate in researches that attempt to establish a causal and effect association. For example, it's not applicable in majority of descriptive/observational studies.

Correlation analysis concerns how the variables of interest merely interact with each other. They do not necessarily have a causal relationship (Mahoney 2001). This study is not intended to describe the reasons for the financial performance of registered banks on the

JSE, but to observe their financial performance over the study period relative to the human capital investment. Therefore, internal validity is not of concern in this study.

3.7.3 Reliability

Golafshani (2003) states that the degree to which the outcomes of a study are consistent over time and accurately portrays the population under the study are said to be reliable. It is also concerned with the correctness of the research instrument, because a research instrument is said to be reliable when the outcomes of the research can be replicated applying similar method (Golafshani, 2003). Comparison of a list of ratios individually for companies and observed evidence for five years has been utilized by researchers such as Altman (1968), and was quoted as conclusive that ratio analysis can be useful in the prediction of company performance (Altman, 1968). Financial ratio comparison and correlational analysis is the research instrument applied in this study that has been utilised by other academics in similar studies. The study should therefore have significant levels of reliability.

CHAPTER 4: PRESENTATION OF RESULTS

4.1 Introduction

This chapter serves to present the outcomes of the analysis of human capital investment and financial performance according to research propositions, conducted following the research methodology outlined in chapter 3. The results relate to the analysis of correlation between training and development spend and financial performance of Banks in South Africa. Furthermore, results of the evaluation of correlation between average salaries spend and financial performance are also presented. The outcomes presented were analysed from six banks that are listed on the Johannesburg Stock Exchange.

4.2 Data collection and analysis

Challenges

Some challenges were experienced and had to be dealt with during the collection and analysis of data.

Non-financial information is not always readily available, particularly in the earlier years. In the years where non-financial information, specifically human capital related information, has been reported, inconsistencies on annual and integrated reports have been found. The information varies from bank to bank, and from year to year. Training and development spend was provided in some reports, and in others the figures were calculated as percentage of staff costs provided in the integrated reports.

Ratios

Inconsistencies were also found on financial ratios provided in the annual reports due to financial statements restatement in the following year after financial statements have been audited. Relevant financial information was gathered from financial statements to calculate revenue, net interest income, ROE, ROA and average salary spend. Net profit after tax was provided in financial statements.

In the review of the banking industry and annual reporting of all banks, cost to income ratio was consistently reported on as one of the highlights of financial performance indicators in relation to the banks' profit and loss. As a result, the cost to income ratio has been included as one of the financial performance indicators in this study. The banks strive to lower the ratio, as it provides the bank's costs in relation to its income, for the period. Over a period of time, the ratio reflects how expenses are changing over revenue. If costs are changing at a rate higher than that of revenue, this ratio would indicate that. Therefore, this ratio can be seen to indicate efficiency of the bank.

Net profit and Cost to Income ratios were not calculated, but provided in the annual reports of the banks. For the purposes of an industry analysis, all relevant figures were aggregated and consolidated training and development spend per capita, average salary spend, net interest income, net profit, ROE, ROA and average cost to income ratios were calculated.

Time Lag

For the analysis, all the independent variables for a specific year were correlated to the financial performance indicators of the following year, to create a one-year time lag between the training and development spend per capita and average salary and financial performance. The analysis was performed in 2 ways, firstly by calculating a correlation between a specific independent variable with a dependent variable, and then a cross-correlation of the dependent variable to be the independent one and the independent one become a dependent one. For example, a correlation analysis was performed on training and development per capita for year *n* and revenue for year *n+1*, where revenue is the dependent variable. Then a cross-correlation analysis was performed on the same variables but where training and development per capita for year *n+1* is the dependent variable and revenue for year *n* is the independent one.

The results will be presented below according to the hypothesis, according to both ways the analysis was performed.

4.3 Results related to Research Question 1

The first Research Question is to evaluate and analyze the impact of the cost of training and development to company's financial performance.

Hypothesis 1 – Training and development spend per capita has a positive correlation to revenue (interest and non-interest (fees) revenue) of a bank.

Table 2: Correlation of training and development spend per capita and revenue

Training and development spend per capita and revenue						
	Industry	ABSA	FirstRand	Investec	Nedbank	SBSA
Correlation	0.62	0.04	0.76	0.44	0.47	0.75

Table 2 above displays the correlation between training and development spend per capita (independent variable) and revenue (dependent variable), by industry and individual banks that were analyzed. The banking industry as a whole had a positive correlation of 0.62, whilst the correlations of the different banks varies with ABSA having almost no correlation (0.04), FirstRand with the strongest positive correlation of 0.76, followed by Standard Bank with a positive correlation of 0.75. Nedbank and Investec have positive but weaker correlations of 0.47 and 0.44 respectively.

Whilst table 3 below shows the correlation between the same variable, however in this analysis training and development spend per capita is the dependent variable and revenue is the independent variable. The table presents results of the extent to which a change in training and development spend per capita is associated with change in revenue, presented by industry and individual banks that were analyzed.

Table 3: Correlation of revenue and training and development spend per capita

Revenue and training and development spend per capita						
	Industry	ABSA	FirstRand	Investec	Nedbank	SBSA
Correlation	0.71	0.39	0.75	0.78	0.76	0.79

The banking industry has a positive correlation of 0.71, whilst the correlations of the different banks ranges in the same correlation with an exception of ABSA, that has a weaker correlation of 0.39.

Hypothesis 2 – Training and development spend per capita has a positive impact on net interest of a bank

Table 4: Correlation of training and development spend per capita and net interest income

Training and development spend per capita and net interest income						
	Industry	ABSA	FirstRand	Investec	Nedbank	SBSA
Correlation	0.95	0.69	0.93	0.82	0.82	0.81

Table 4 above displays the correlation between training and development spend per capita (independent variable) and net interest income (dependent variable), by industry and individual banks that were analyzed. It shows the change in net interested is associated with training and development spend per capita. The banking industry has a strong positive correlation of 0.95, whilst the correlations of the different banks vary with ABSA having the lowest but strong correlation of 0.69. FirstRand has the strongest correlation of 0.93 and Investec, Nedbank and Standard Bank have similar correlations of 0.82, 0.82 and 0.81 respectively.

Table 5 below shows the correlation between the same variable, however in this analysis training and development spend per capita is the dependent variable and net interest is the independent variable. The table presents results of the extent to which a change in training and development spend per capita is associated with change in net interest, presented by industry and individual banks that were analyzed.

Table 5: Correlation of net interest income and training and development spend per capita

Net interest income and training and development spend per capita						
	Industry	ABSA	FirstRand	Investec	Nedbank	SBSA
Correlation	0.95	0.77	0.76	0.79	0.94	0.89

The banking industry has a strong positive correlation of 0.95. The individual banks all have strong positive correlations, varying from ABSA with 0.77 to FirstRand, Investec, Nedbank and Standard bank having 0.76, 0.79, 0.94 and 0.89 respectively.

Hypothesis 3 – Training and development spend per capita has a positive impact on net operating profit after tax of a bank

Table 6: Correlation of training and development spend per capita and net profit

Training and development spend per capita and net profit						
	Industry	ABSA	FirstRand	Investec	Nedbank	SBSA
Correlation	0.81	0.05	0.93	0.58	0.64	0.60

Table 6 above displays the correlation between training and development spend per capita (independent variable) and net profit after tax (dependent variable), by industry and individual banks that were analyzed. It shows the relationship between a change in net profit and training and development spend per capita. The banking industry has a strong positive correlation of 0.81. The individual correlations of the different banks vary with ABSA having no correlation of 0.05. Whilst FirstRand has the strongest positive correlation of 0.93 and Investec, Nedbank and Standard Bank have lower positive correlations of 0.58, 0.64 and 0.60 respectively.

Table 7 below shows the correlation between the same variable, however in this analysis training and development spend per capita is the dependent variable and net profit is the independent variable. The table presents results of the extent to which a change in training and development spend per capita is associated with change in net profit, presented by industry and individual banks that were analyzed.

Table 7: Correlation of net profit and training and development spend per capita

Net profit and training and development spend per capita						
	Industry	ABSA	FirstRand	Investec	Nedbank	SBSA
Correlation	0.86	0.11	0.90	0.84	0.88	0.80

The banking industry has a strong positive correlation of 0.86. The individual banks all have strong positive correlations, with an exception of ABSA with a very weak correlation of 0.11. FirstRand, Investec, Nedbank and Standard bank have close positive correlations of 0.90, 0.84, 0.88 and 0.80 respectively.

Hypothesis 4 – Training and development spend per capita has a positive impact on return on assets (ROA) of a bank

Table 8: Correlation of training and development spend per capita and return on assets

Training and development spend per capita and return on assets						
	Industry	ABSA	FirstRand	Investec	Nedbank	SBSA
Correlation	-0.57	-0.63	0.51	-0.97	-0.38	-0.82

Table 8 above displays the correlation between training and development spend per capita (independent variable) and ROA (dependent variable), by industry and individual banks that were analyzed. It the extent to which a change in ROA is associated with a change in training and development spend per capita. The banking industry has a moderate negative correlation of 0.57. The individual correlations of the different banks vary with ABSA and Nedbank having moderate negative correlations of 0.63 and 0.38. FirstRand has a moderate positive correlation of 0.51, and Investec and Standard Bank have strong negative correlations of 0.97 and 0.82 respectively.

Table 9 below shows the correlation between the same variables, however in this analysis training and development spend per capita is the dependent variable and ROA is the independent variable. The table presents results of an analysis of the extent to which a change in training and development spend per capita is associated with change in ROA, presented by industry and individual banks that were analyzed.

Table 9: Correlation of return on assets and training and development spend per capita

Return on assets and training and development spend per capita						
	Industry	ABSA	FirstRand	Investec	Nedbank	SBSA
Correlation	-0.57	-0.88	0.34	-0.70	0.24	-0.57

The banking industry has a moderate negative correlation of 0.57. The individual banks vary with ABSA having a strong negative correlation of 0.88, followed by Investec with -0.77 and Standard Bank with -0.57. FirstRand has a weak positive correlation of 0.34.

Hypothesis 5 – Training and development spend per capita has a positive impact on return on equity (ROE) of a bank

Table 10: Correlation of training and development spend per capita and return on equity

Training and development spend per capita and return on equity						
	Industry	ABSA	FirstRand	Investec	Nedbank	SBSA
Correlation	-0.80	-0.64	-0.02	-0.88	-0.71	-0.85

Table 10 above displays the correlation between training and development spend per capita (independent variable) and ROE (dependent variable), by industry and individual banks that were analyzed. It shows the extent to which a change in ROE is associated with a change in training and development spend per capita. The banking industry has a strong negative correlation of 0.80. This is supported by the individual correlations of the different banks with an exception of FirstRand Bank with almost no correlation of -0.02, whilst ABSA, Investec, Nedbank and Standard Bank show strong negative correlations of 0.64, 0.88, 0.71 and 0.85 respectively.

Table 11 below shows the correlation between the same variables, however in this analysis training and development spend per capita is the dependent variable and ROE is the independent variable. The table shows the extent to which a change in training and development spend per capita is associated with change in ROE, presented by industry and individual banks that were analyzed.

Table 11: Correlation of return on equity and training and development spend per capita

Return on equity and training and development spend per capita						
	Industry	ABSA	FirstRand	Investec	Nedbank	SBSA
Correlation	-0.83	-0.87	-0.45	-0.78	-0.73	-0.66

The banking industry has a strong negative correlation of 0.83. The individual correlations of the different banks, with an exception of FirstRand Bank with a moderate negative correlation of 0.45, support the industry correlation with ABSA, Investec, Nedbank and Standard Bank having strong negative correlations of 0.87, 0.78, 0.73 and 0.66 respectively.

Hypothesis 6 – Training and development spend per capita has a negative impact on Cost-to-Income ratio of a bank

Table 12: Correlation of training and development spend per capita and cost to income ratio

Training and development spend per capita and cost to income ratio						
	Industry	ABSA	FirstRand	Investec	Nedbank	SBSA
Correlation	-0.13	0.44	-0.64	0.53	-0.12	0.11

Table 12 above displays the correlation between training and development spend per capita (independent variable) and Cost to Income ratio (dependent variable), by industry and individual banks that were analyzed. It shows the extent to which a change in cost to income ratio is associated with a change in training and development spend per capita. The banking industry has a weak negative correlation of 0.13. The individual correlations of the different banks vary with ABSA and Investec having moderate positive correlations of 0.44 and 0.53. FirstRand has a moderate negative correlation of 064, and Nedbank and Standard Bank have very weak correlations of -0.12 and 0.11 respectively

Table 13 below displays the correlation between the same variables, however in this analysis training and development spend per capita is the dependent variable and Cost to Income ratio is the independent variable. The table shows the extent to which a change in training and development spend per capita is associated with change in Cost to income ratio, presented by industry and individual banks that were analyzed.

Table 13: Correlation of cost to income ratio and training and development spend per capita

Cost to income ratio and training and development spend per capita						
	Industry	ABSA	FirstRand	Investec	Nedbank	SBSA
Correlation	-0.33	-0.04	-0.79	0.21	-0.50	-0.25

The banking industry has a weak negative correlation of 0.33 between training and development per capita and Cost to Income ratio. The individual correlations of the different banks, with an exception of FirstRand Bank with a strong negative correlation of 0.79, support the industry correlation with ABSA, Investec, Nedbank and Standard Bank having weak to moderate negative correlations of 0.04, 0.21, 0.50 and 0.25 respectively.

4.4 Results related to Research Question 2

The second Research Question is to evaluate and analyze the impact of average salary spend to a company's financial performance.

Hypothesis 7 – Average salary spend has a positive correlation to revenue (interest and non-interest (fees) revenue) of a bank

Table 14: Correlation of average salary spend and revenue

Average salary spend and revenue						
	Industry	ABSA	FirstRand	Investec	Nedbank	SBSA
Correlation	0.60	0.25	0.79	0.88	0.47	0.64

Table 14 above displays the correlation between average salary spend (independent variable) and revenue (dependent variable), by industry and individual banks that were analyzed. The banking industry has a positive correlation of 0.60, whilst the correlations of the different banks varies with ABSA having the weakest positive correlation of 0.25, Investec with the strongest positive correlation of 0.88, followed by FirstRand with a positive correlation of 0.79. Nedbank and Standard Bank have positive but moderate correlations of 0.47 and 0.64 respectively.

Whilst table 15 below shows the correlation between the same variable, however in this analysis average salary spend is the dependent variable and revenue is the independent variable. The table shows the extent to which a change in average salary spend is associated with change in revenue, presented by industry and individual banks that were analyzed.

Table 15: Correlation of revenue and average salary spend

Revenue and average salary spend						
	Industry	ABSA	FirstRand	Investec	Nedbank	SBSA
Correlation	0.63	0.36	0.87	0.69	0.50	0.55

The banking industry has a positive correlation of 0.63, whilst the correlations of the different banks ranges in the same correlation with an exception of ABSA, that has a weaker correlation of 0.36 and FirstRand with a strong positive correlation of 0.87.

Hypothesis 8 – Average salary spend has a positive impact on net interest income of a bank

Table 16: Correlation of average salary spend and net interest income

Average salary spend and net interest income						
	Industry	ABSA	FirstRand	Investec	Nedbank	SBSA
Correlation	0.95	0.87	0.85	0.91	0.82	0.97

Table 16 above displays the correlation between average salary spend (independent variable) and net interest income (dependent variable), by industry and individual banks. The table displays the extent to which the change in net interest income is associated with average salary spend. The banking industry presented a strong positive correlation of 0.95. The correlations of the different banks vary, but also presented strong positive correlation, with Standard Bank having the strongest positive correlation of 0.97, followed by Investec with 0.91. ABSA, FirstRand and Nedbank presented similar correlations of 0.87, 0.85 and 0.82 respectively.

Table 17 below shows the correlation between the same variables, however in this analysis average salary spend is the dependent variable and net interest income is the independent variable. The table presents results of the extent to which a change in average salary spend is associated with a change in net interest income, presented by industry and individual banks that were analyzed.

Table 17: Correlation of net interest income and average salary spend

Net interest income and average salary spend						
	Industry	ABSA	FirstRand	Investec	Nedbank	SBSA
Correlation	0.93	0.85	0.85	0.94	0.85	0.91

The banking industry has a strong positive correlation of 0.93. The individual banks all have strong positive correlations, varying from ABSA with 0.85 to FirstRand, Investec, Nedbank and Standard bank having 0.85, 0.94, 0.85 and 0.91 respectively

Hypothesis 9 – Average salary spend has a positive impact on Net Operating Profit of a bank

Table 18: Correlation of average salary spend and net profit

Average salary spend and net profit						
	Industry	ABSA	FirstRand	Investec	Nedbank	SBSA
Correlation	0.85	0.19	0.88	0.88	0.90	0.84

Table 18 above displays the correlation between average salary spend (independent variable) and net profit after tax (dependent variable), by industry and individual banks. The table presents the relationship between a change in net profit and average salary spend. The banking industry has a strong positive correlation of 0.85. The individual correlations of the different banks presented correlations within the same range as the industry with the exception of ABSA that has a very weak correlation of 0.19. Nedbank has the strongest positive correlation of 0.90 and FirstRand, Invested and Standard Bank have lower but strong positive correlations of 0.88, 0.88 and 0.84 respectively.

Table 19 below presents the correlation between the same variables, however, in this analysis average salary spend is the dependent variable and net profit is the independent variable. The table presents results of the extent to which a change in average salary spend is associated with a change in net profit, presented by industry and individual banks that were analyzed.

Table 19: Correlation of net profit and average salary spend

Net profit and average salary spend						
	Industry	ABSA	FirstRand	Investec	Nedbank	SBSA
Correlation	0.82	0.33	0.82	0.84	0.70	0.87

The banking industry has a strong positive correlation of 0.82. The individual banks all have strong positive correlations, with an exception of ABSA with a weak correlation of 0.33. FirstRand, Investec, Nedbank and Standard bank have close positive correlations of 0.82, 0.84, 0.70 and 0.87 respectively.

Hypothesis 10 – Average salary spend has a positive impact on return on assets (ROA) of a bank

Table 20: Correlation of average salary spend and return on assets

Average salary spend and return on assets						
	Industry	ABSA	FirstRand	Investec	Nedbank	SBSA
Correlation	-0.51	-0.76	0.34	-0.70	0.15	-0.63

Table 20 above displays the correlation between average salary spend (independent variable) and ROA (dependent variable), by industry and individual banks that were analyzed. It is the extent to which a change in ROA is associated with a change in average salary spend. The banking industry has a moderate negative correlation of 0.51. The individual correlations of the different banks vary with ABSA and Investec having strong negative correlations of 0.76 and 0.70. Standard Bank has a moderate correlation of -0.63. FirstRand and Nedbank presented weak negative correlations of 0.34 and 0.15 respectively.

Table 21 below shows the correlation between the same variables, however in this analysis average salary spend is the dependent variable and ROA is the independent variable. The table presents results of the extent to which a change in average salary spend is associated with a change in ROA, presented by industry and individual banks that were analyzed.

Table 21: Correlation of return on assets and average salary spend

Return on assets and average salary spend						
	Industry	ABSA	FirstRand	Investec	Nedbank	SBSA
Correlation	-0.58	-0.75	0.14	-0.62	0.01	-0.62

The banking industry has a moderate negative correlation of 0.58. The individual banks vary with ABSA having a strong negative correlation of 0.88, followed by Investec and Standard Bank both with moderate negative correlation of 0.62. FirstRand and Nedbank presented almost no correlation with 0.14 and 0.01 respectively.

Hypothesis 11 – Average salary spend has a positive impact on return on equity (ROE) of a bank

Table 22: Correlation of average salary spend and return on equity

Average salary spend and return on equity						
	Industry	ABSA	FirstRand	Investec	Nedbank	SBSA
Correlation	-0.76	-0.74	-0.19	-0.57	-0.29	-0.88

Table 22 above presents the correlation between average salary spend (independent variable) and ROE (dependent variable), by industry and individual banks. It displays the extent to which a change in ROE is associated with a change in average salary spend. The banking industry has a strong negative correlation of 0.76. The individual banks correlations vary, with Standard Bank and ABSA with strong negative correlations of 0.88 and 0.76 respectively. Investec shows a moderate negative correlation of 0.57, and FirstRand and Nedbank have weak negative correlations of 0.19 and 0.29.

Table 23 below shows the correlation between the same variables, however in this analysis average salary spend is the dependent variable and ROE is the independent variable. The table shows the extent to which changes in average salary spend is associated with change in ROE, presented by industry and individual banks that were analyzed.

Table 23: Correlation of return on equity and average salary spend

Return on equity and average salary spend						
	Industry	ABSA	FirstRand	Investec	Nedbank	SBSA
Correlation	-0.78	-0.77	-0.55	-0.44	-0.53	-0.86

The banking industry has a strong negative correlation of 0.78. The individual banks correlations vary, with Standard Bank and ABSA with strong negative correlations of 0.86 and 0.77 respectively. FirstRand, Investec and Nedbank have moderate negative correlations of 0.55 0.44, and 0.53.

Similarly, to Research Question one, an analysis of average salary spend and Cost to Income ratio was also performed. Table 24 below displays the correlation between average salary spend (independent variable) and Cost to Income ratio (dependent variable), by industry and individual banks that were analyzed.

Hypothesis 12 – Average salary spend has a negative impact on Cost to income ratio of a bank

Table 24: Correlation of average salary spend and cost to income ratio

Average salary spend and cost to income ratio						
	Industry	ABSA	FirstRand	Investec	Nedbank	SBSA
Correlation	-0.07	0.36	-0.79	0.05	-0.06	0.47

The table presents the extent to which a change in cost to income ratio is associated with a change in average salary spend. The banking industry showed no connections between changes in average salary spend and cost to income ratio with a very weak correlation of negative 0.07. The individual correlations of the different banks vary with ABSA and Standard Ban having moderate positive correlations of 0.36 and 0.47. FirstRand has a strong negative correlation of 0.79, and Investec and Nedbank have very weak correlations of 0.05 and 0.06 respectively

Table 25 below displays the correlation between the same variables, however in this analysis average salary spend is the dependent variable and Cost to Income ratio is the independent variable. The table shows the extent to which a change in average salary spend is associated with change in Cost to income ratio, presented by industry and individual banks that were analyzed.

Table 25: Correlation of cost to income ratio and average salary spend

Cost to income ratio and average salary spend						
	Industry	ABSA	FirstRand	Investec	Nedbank	SBSA
Correlation	-0.28	0.08	-0.79	-0.19	-0.17	0.24

The banking industry presented a weak negative relationship between average salary spend and cost to income ratio, with a correlation of -0.28. The individual banks correlations vary, with Standard Bank and ABSA with weak positive correlations of 0.24 and 0.08 respectively. Investec and Nedbank also have very weak but negative correlations of 0.19 and 0.17. FirstRand, on the other hand, has a strong negative correlation of 0.79.

4.5 Summary of results

In following the research approach defined in chapter 3 to collect and investigate the association between human capital investment and financial performance, summaries of results are presented in the following two tables.

Table 26: Summary table listing correlations for training and development spend and financial performance

Correlation for Research Question 1						
	Industry	ABSA	FirstRand	Investec	Nedbank	SBSA
T&D/capita and Revenue	0.62	0.04	0.76	0.44	0.47	0.75
Revenue and T&D/Capita	0.71	0.39	0.75	0.78	0.76	0.79
T&D/Capita and Net Interest	0.95	0.69	0.93	0.82	0.82	0.81
Net Interest and T&D/Capita	0.95	0.77	0.76	0.79	0.94	0.89
T&D/Capita and Net Profit	0.81	0.05	0.93	0.58	0.64	0.60
Net Profit and T&D/Capita	0.86	0.11	0.90	0.84	0.88	0.80
T&D/Capita and ROE	-0.80	-0.64	-0.02	-0.88	-0.71	-0.85
ROE and T&D/Capita	-0.83	-0.87	-0.45	-0.78	-0.73	-0.66
T&D/Capita and ROA	-0.57	-0.63	0.51	-0.97	-0.38	-0.82
ROA and T&D/Capita	-0.57	-0.88	0.34	-0.70	0.24	-0.57
T&D/Capita and Cost to Income %	-0.13	0.44	-0.64	0.53	-0.12	0.11
Cost to Income % and T&D/Capita	-0.33	-0.04	-0.79	0.21	-0.50	-0.25

Table 26 above provides a summary of correlations between training and development spend per capita and selected indicators of financial performance. From an industry point of view, it is found that training and development spend per capita has strong positive correlation with revenue and net interest. And an even stronger positive correlation is found between training and development spend per capita and net profit is found. However, a strong negative correlation between training and development spend per capita and return on equity (ROE). Whilst it was found that training and development spend per capita has a moderate negative correlation with return on assets (ROA), and a weak negative correlation with cost to income ratio.

The individual banks were found to have different correlations between training and development spend per capita and the selected financial performance indicators because of the different strategies and organizational changes that they embarked on during the period under review.

Table 27 below provides a summary of correlations between average salary spend and selected indicators of financial performance.

Table 27: Summary table listing correlations for average salary spend and financial performance

Correlations for Research Question 2						
	Industry	ABSA	FirstRand	Investec	Nedbank	SBSA
Av. Salary and Revenue	0.60	0.25	0.79	0.88	0.47	0.64
Revenue and Av. Salary	0.63	0.36	0.87	0.69	0.50	0.55
Av. Salary and Net Interest	0.95	0.87	0.85	0.91	0.82	0.97
Net Interest and Av. Salary	0.93	0.85	0.85	0.94	0.85	0.91
Av. Salary and Net Profit	0.85	0.19	0.88	0.88	0.90	0.84
Net Profit and Av. Salary	0.82	0.33	0.82	0.84	0.70	0.87
Av. Salary and ROE	-0.76	-0.74	-0.19	-0.57	-0.29	-0.88
ROE and Av. Salary	-0.78	-0.77	-0.55	-0.44	-0.53	-0.86
Av. Salary and ROA	-0.51	-0.76	0.34	-0.70	0.15	-0.63
ROA and Av. Salary	-0.58	-0.75	0.14	-0.62	0.01	-0.62
Av. Salary and Cost to Income %	-0.07	0.36	-0.79	0.05	-0.06	0.47
Cost to Income % and Av. Salary	-0.28	0.08	-0.79	-0.19	-0.17	0.24

In the banking industry, it was found that average salary spend has a strong positive correlation with revenue, and an even stronger positive correlation is found net interest and net profit. However, a strong negative correlation between average salary spend and return on equity (ROE) was found. Furthermore, it was found that average salary spend has a moderate negative correlation with return on assets (ROA), and a very weak negative correlation with cost to income ratio.

CHAPTER 5: DISCUSSION OF RESULTS

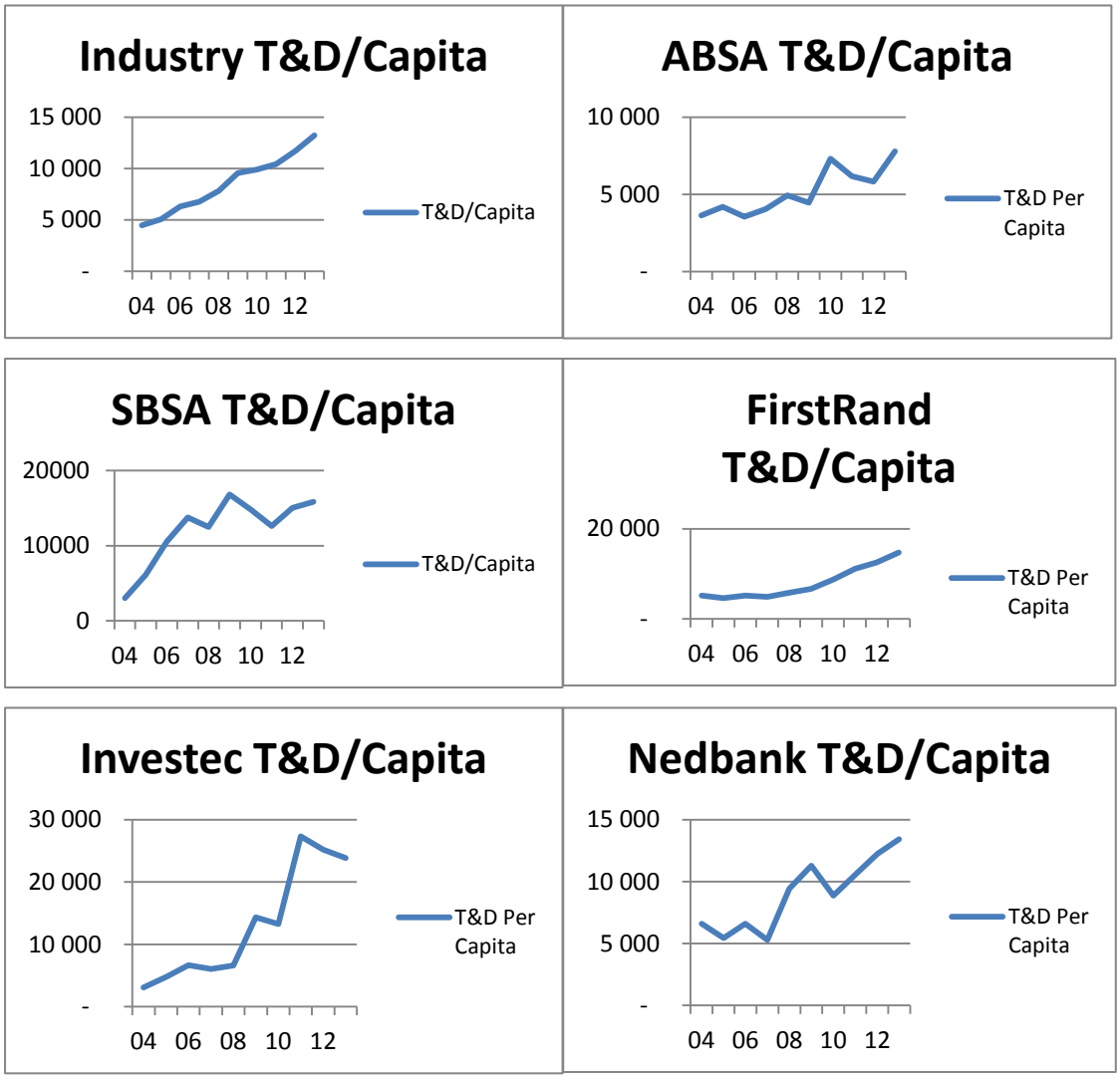
5.1 Introduction

This chapter aims to interpret and discuss the results of the study that was presented in Chapter 4 relative to literature review and the Research Questions deliberated and formulated in the second chapter. This chapter comprises of an interpretation and deliberation of the results of an analysis of the relationship between human capital investment and financial performance in the South African Banking industry. A comparison of the results with the outcomes obtained in the Weiland and Flavel (2015) study is done to examine for consistency of findings of these studies.

5.2 Research Question 1

The following diagrams give and overview of training and development spend per capita for the banking industry and the five banks that were analysed. Diagrams for financial performance are provided and discussed in the relevant sub-heading, with the specific correlations included in small boxes on the right hand corner of the diagrams.

Figure 3: Banks' training and development spend per capita



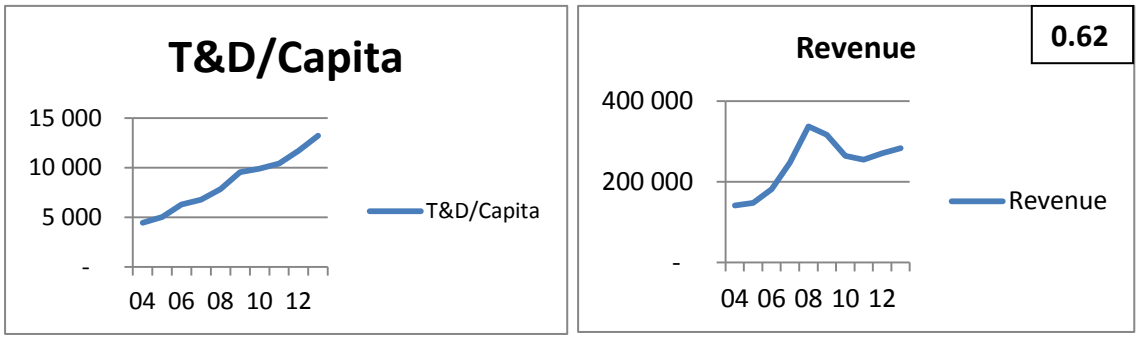
5.2.1 Training and development spend per capita and revenue

Hypothesis 1 – Training and development spend per capita has a positive correlation to revenue (interest and non-interest (fees) revenue) of a bank

In support of hypothesis 1, the South African banking industry was found to have a positive correlation (0.62) between training and development spend per capita and revenue. This analysis indicates that an increase in revenue in the year *n+1* is, to a certain extent, associated with an increase in training and development spend per capita in *n*. However, to even higher extent, with a correlation of 0.71, an increase in training and development spend per capita in year *n+1* is associated with an increase in revenue in *n*. The following

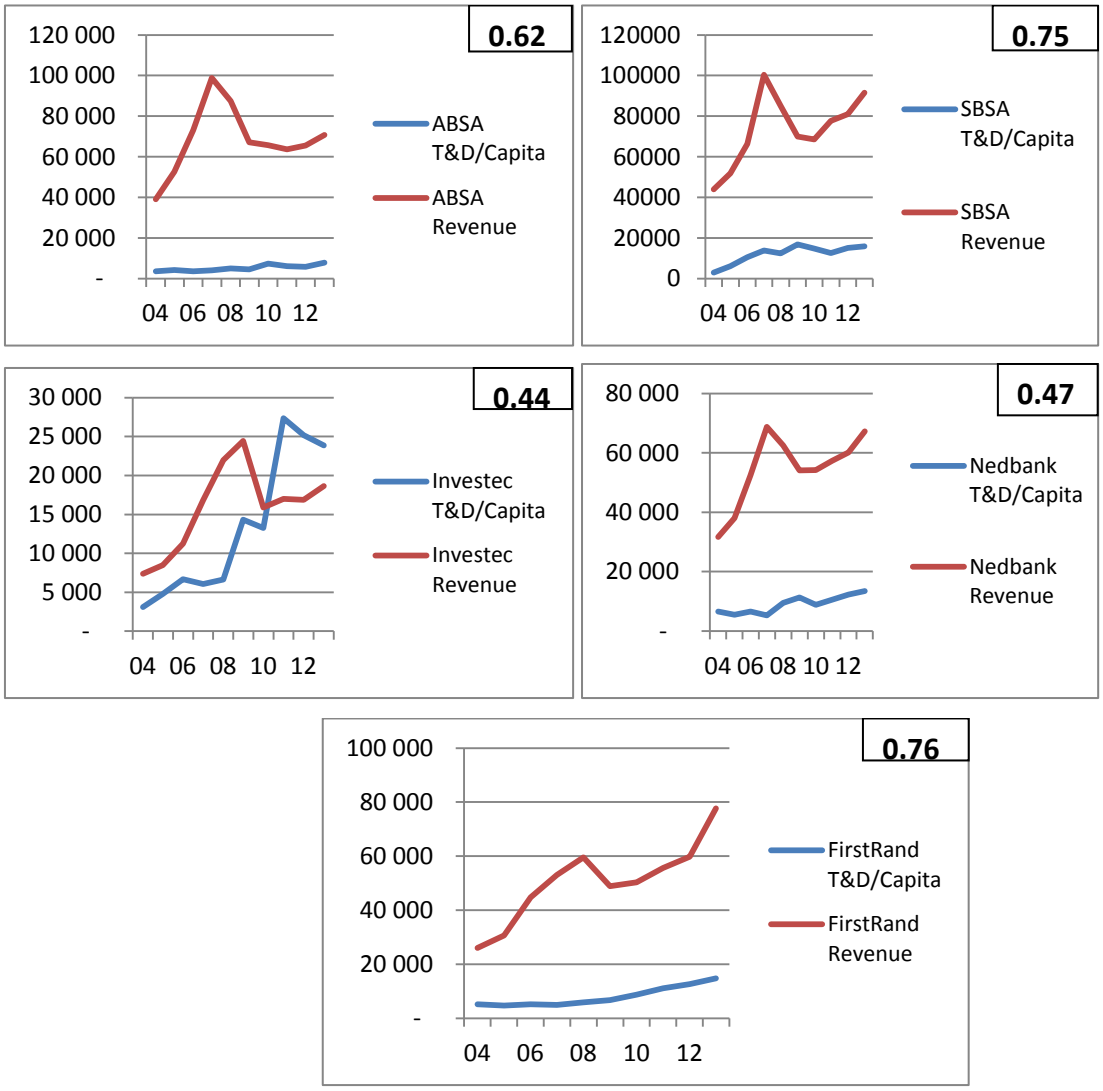
diagram shows the positive correlation between these two variables, the correlation is provided in the box on the top right corner of the diagram:

Figure 4: Banking Industry Training and Development Spend per Capita



Even though the individual banks' correlations differ on the extent to which change in revenue is associated with changes training and development spend per capita, the correlations for the extent to which changes in training and development spend is associated with changes in revenue all reflect a strong positive correlation. This is supported by the slack resource theory that suggests that a company that indicates high financial performance has more resources available to invest in staff related activities (Weiland and Flavel, 2015). The following diagrams present the individual banks' overview of training and development spend per capita and revenue:

Figure 5: Banks' Training and Development Spend per Capita and Revenue

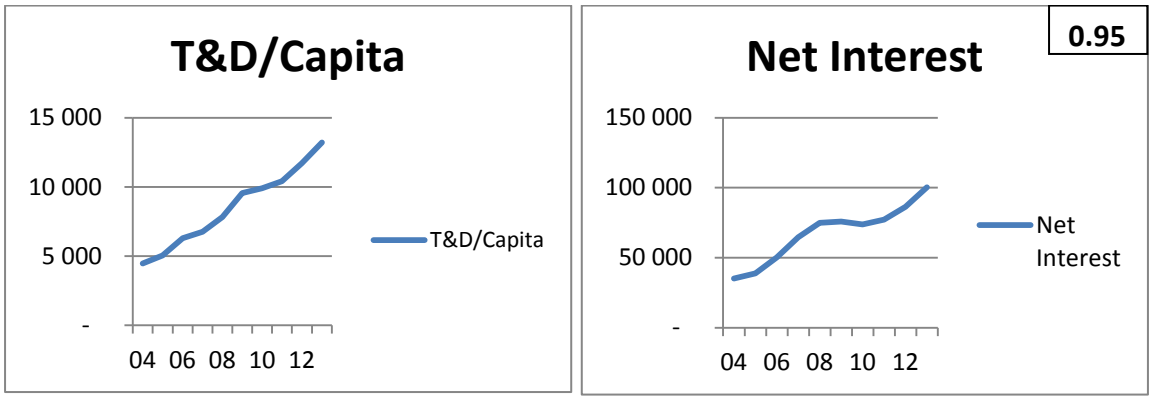


5.2.2 Training and development spend per capita and net interest

Hypothesis 2 – Training and development spend per capita has a positive impact on net interest of a bank

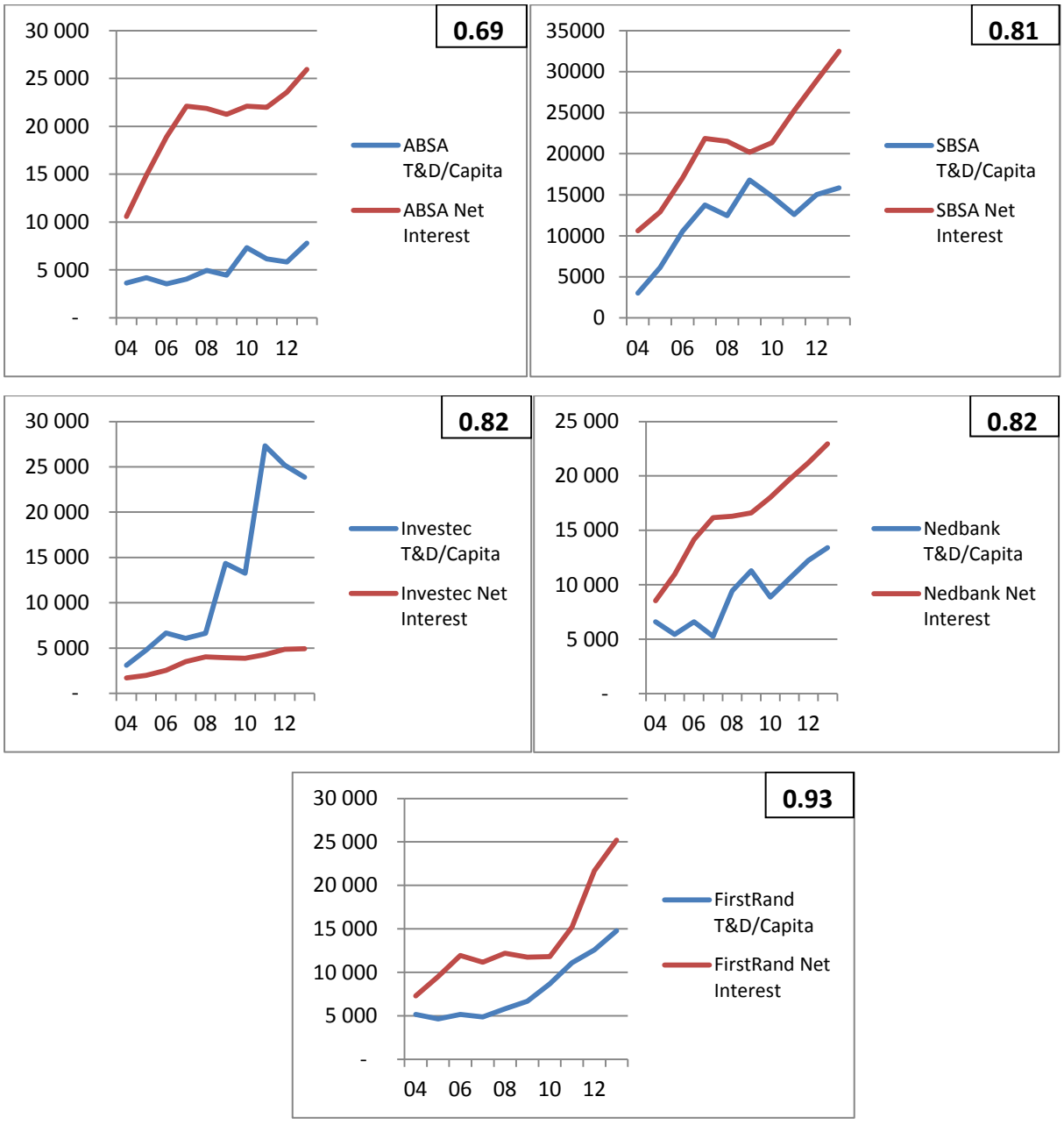
Net interest is one of the key drivers of profitability in the South African banking industry. Interest income is a primary source of revenue in all banks analysed, as identified in the annual reports of the banks. In support of hypothesis 2, training and development per capita has been found to have a strong positive correlation (0.95) with net income. This indicates that an increase in net interest in the year *n+1*, in the South African banking industry, is strongly associated with increase training and development spend per capita in *n*. The following diagram shows the industry's strong positive correlations between these two variables:

Figure 6: Banking Industry Net interest overview



Weiland and Flavel (2015) suggest that "a company's social profile is positively impacted by the level of profitability". The banking industry has been found to have a very strong correlation (0.95) between net interest and training and development spend per capita. This indicates that an increase in training and development spend per capita in year n+1 is strongly associated with an increase in net interest in year n. Finding the same correlation between training and development spend per capita and net interest when they are analysed in the two ways suggest a reciprocal relationship between the two variables. This is supported by the study of Weiland and Flavel (2015) that suggests a reciprocal relationship between employee orientation and financial performance in a company. The following diagrams present the individual banks' overview of training and development spend per capita and net interest:

Figure 7: Banks' Training and Development Spend per Capita and Net Interest



The individual correlations of the different banks were found to be strong and positive for these two variables, indicating that there is a strong positive association between training and development spend per capita and net interest. However, they differ in strengths. ABSA bank was found to have a less strong positive correlation of 0.69. The differences occur due to different sizes, strategies and major changes that occur within an organisation. Post the financial crisis, ABSA for example reduced its lending business and therefore cutting its

retail business significantly that resulted in lower interest income, according to the Macquarie Research, SA Banking sector report (2015).

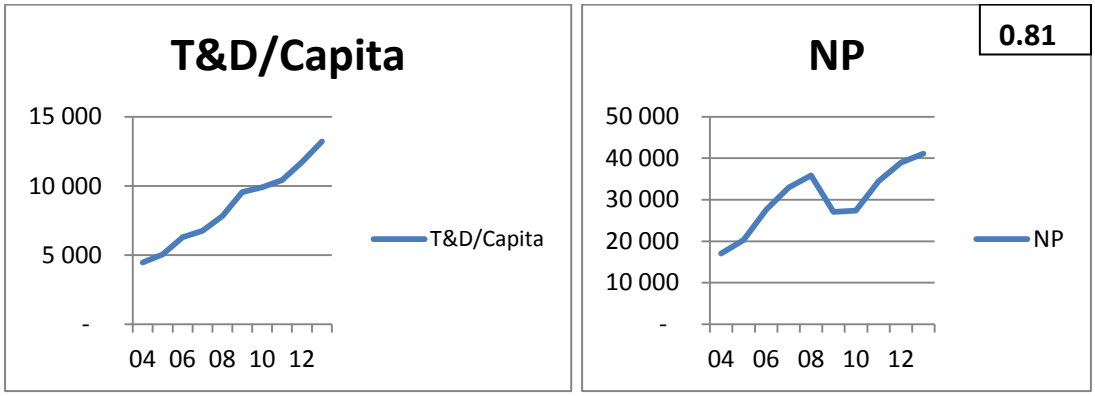
All the banks were found to have an even stronger correlation between training and development spend per capita and net interest, indicating that an increase in training and development spend per capita in year *n+1* is even more associated with an increase in net interest in year *n*. This finding supports the hypothesis 2 that was formulated in chapter 2, which suggests a positive correlation between training and development spend per capita and net interest. Furthermore, it is supported by Weiland and Flavel (2015), who suggest that employee orientation activities, including training and development, increases employee motivation and loyalty to company and its customers, and thus productivity and financial performance. Investec still shows a strong positive correlation, even though a significant amount of revenue is gained from foreign exchange between the Rand and the British Pound. All the banks were found to have stronger positive correlation between net interest and training and development spend per capita, indicating that an increase in training and development spend per capita is, even more, associated with an increase in net interest.

5.2.3 Training and development spend per capita and net profit

Hypothesis 3 – Training and development spend per capita has a positive correlation with net operating Profit of a bank

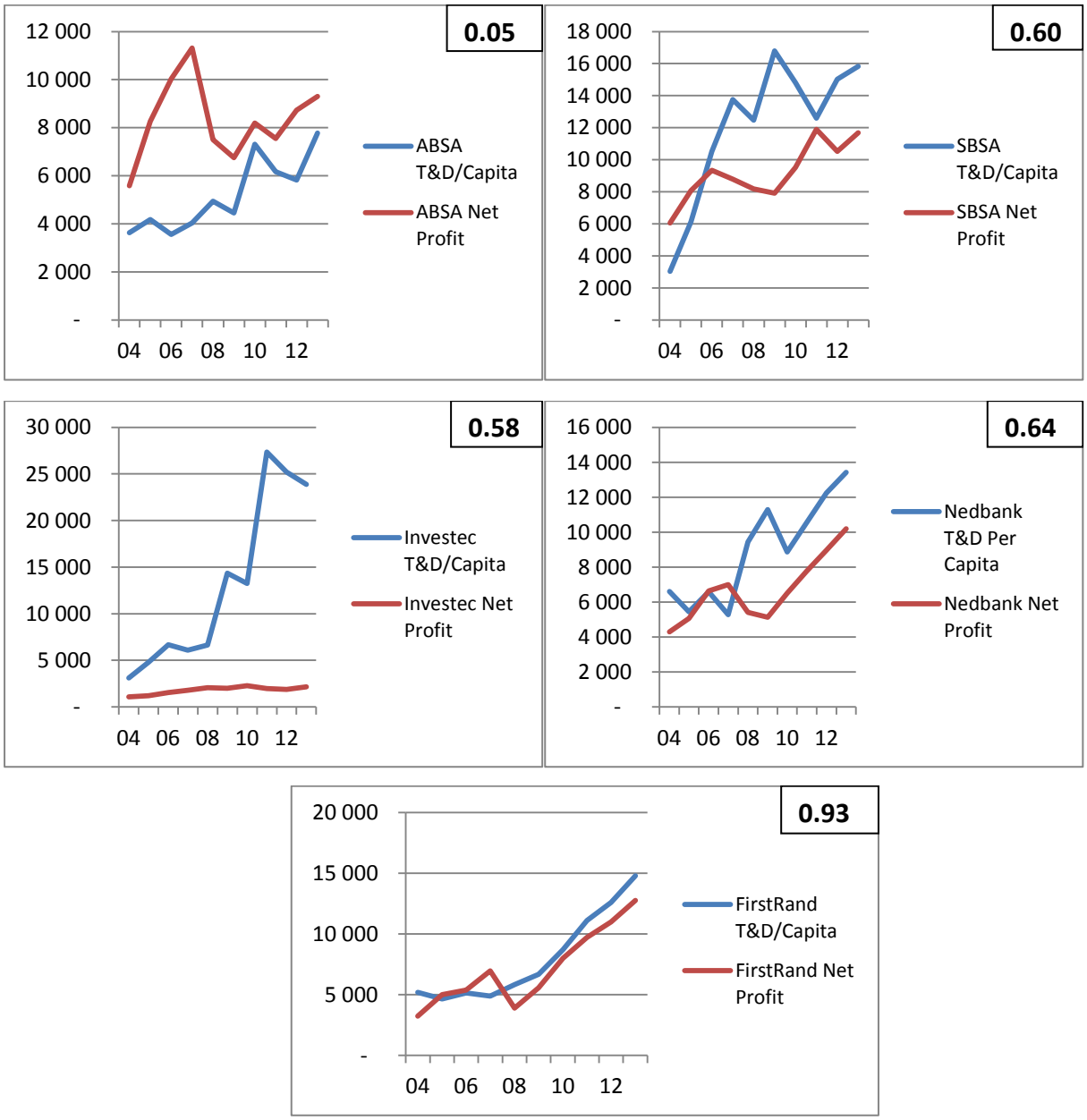
Net profit after tax is the amount made by a company after taking into account all operating expenses. This indicator often assesses what a company is really earning (profitability) after taking into account all tax expenses. In the South African banking industry, the relationship between training and developments spend per capita and net profit is found to be strong, with a positive correlation of 0.81. This indicates that an increase in net profit in year *n+1* is associated with an increase in training and development spend per capita in year n. This result supports the suggestion by Aburgre and Adebola (2015) that training and development has a significant relationship with employees' performance, and consequently the performance of banks. The diagram below displays the strong positive correlations between these two variables:

Figure 8: Banking Industry Net Profit overview



It was also found that net profit and training and development spend per capita have an even stronger positive correlation of 0.81 for the banking industry, indicating that an increase in training and development spend per capita in year *n+1* is even more associated with an increase in net profit in year *n*. The level of profitability in a company contributes to an organization's social activities, including training and development (Weiland and Flavel 2015). This finding supports hypothesis 4 that is described in chapter 2 that suggests that training and development spend per capita and net profit have a positive correlation in the South African banking industry. The following diagrams present the individual banks' overview of training and development spend per capita and net profit:

Figure 9: Banks' Training and Development Spend per Capita and Net profit



The different banks have been found to have different levels of positive correlation between training and development spend per capita and net profit, with the exception of ABSA was found to have almost no correlation (0.05) of the 2 variables. In comparison with the bank (FirstRand) that is sitting on the top position of the top 4 banks in South Africa, according to Macquarie Research, SA Banking sector report (2015), ABSA embarked on an expansion strategy that saw the bank increasing presence through branches and employees. However, after the merger, the bank cut lending and lost customer base, and lost significant revenue as a result. The bank further increased pay-out of dividends and did not reduce costs, significantly impacting on profitability, as seen on the diagram above. This was

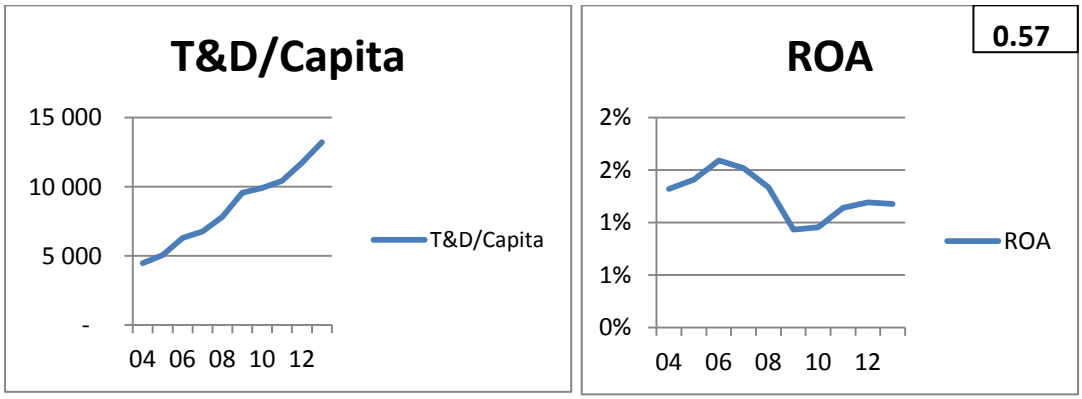
further worsened by the change in legislation that regulates banking fees, further reducing non-interest income. FirstRand, on the other hand increased its retail customer base with innovative products and the graphs displays the increase in profitability and training and development spend per capita. While Nedbank is mainly a corporate banking company, but maintains almost same presence as standard bank South Africa. This results in high operating costs for branches and staff, even though their retail banking is small.

5.2.4 Training and development spend per capita and ROA

Hypothesis 4 – Training and development spend per capita has a positive impact on return on assets (ROA) of a bank

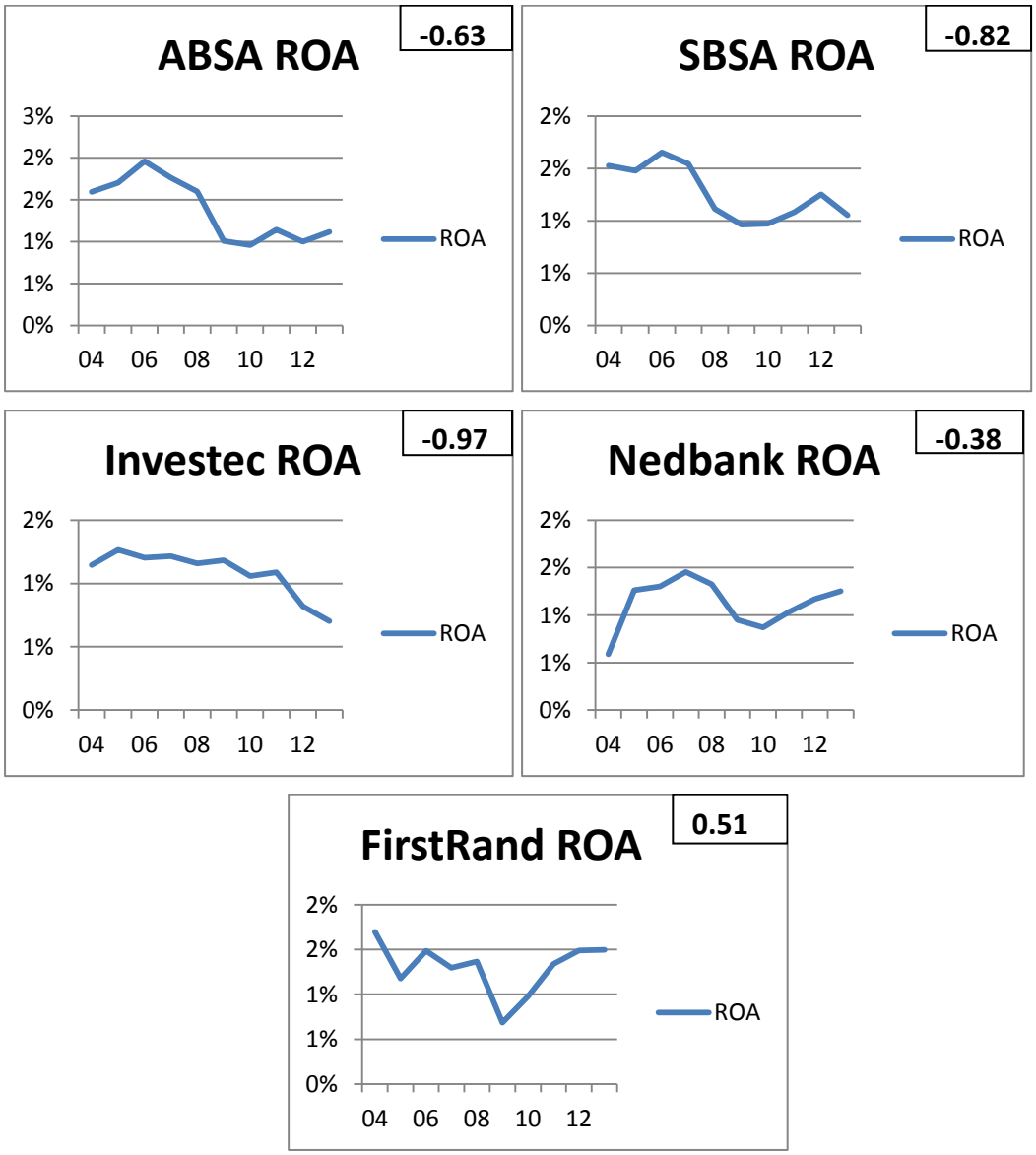
Some researchers agree that training and development is one of the key drivers of enhanced organizational performance, because it increases the level of employee performance and consequently organizational performance. Aburgre and Adebola (2015) suggest that it bridges the gap between action that should be taken and the action that is taken, and therefore increasing efficiency. ROA reflects on the percentage of profit a company makes in relation to resources (assets), and therefore could be used to measure efficiency (Aburgre and Adebola, 2015). A higher ROA suggest better management of assets. It is found that the training and development spend per capita and ROA, in the South African banking industry, have a moderate negative correlation (0.57). This indicates that a decrease in ROA in year *n+1*, is to moderate extent, associated with an increase in training and development spend per capita in year *n*. The following diagram displays an overview of ROA for the SA's banking industry:

Figure 10: Banking Industry ROA overview



This finding supports the trade-off and traditional human relations theories that indicate that human resources activities and financial performance are negatively correlated (Weiland and Flavel, 2015). The authors suggest that human capital investment activities such as training and development spend increase costs and hinder value creation of a company (Weiland and Flavel, 2015). Contrary to hypothesis 4 that suggests a positive correlation between training and development spend per capita and ROA, it is found that a negative correlation exists between the two variables in the South African banking industry. This suggests that even though there's a strong positive correlation between training and development spend and revenue as well as net profit, over investment in training and development spend could have a negative impact on value creation of a company. It was also found that the correlation between ROA and training and development spend have the same negative correlation, indicating that a decrease in training and development spend per capita in year *n+1* is, to a certain extent, associated with an increase in ROA in *n*. This suggests a reciprocal relationship between the two variables.

Figure 11: Banks' Training and Development Spend per Capita and ROA



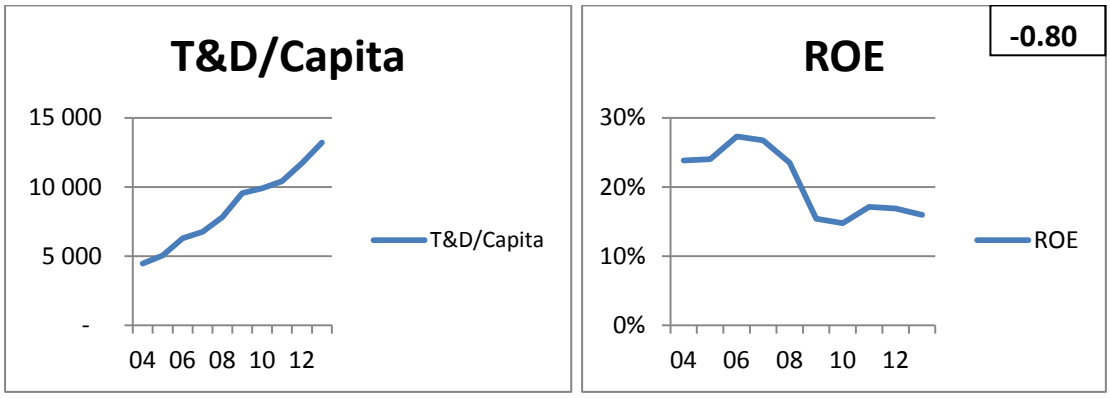
The individual correlations of training and development spend and ROA for the different banks ranges from moderate to strong negative correlations. This is because different banks embark on different strategies and major changes, therefore overinvestment in human capital may hinder value creation for companies (Weiland and Flavel, 2015). Investec and SBSA were found to have stronger negative correlations, while ABSA showed moderation correlation and Nedbank had weak correlation between the 2 variables. FirstRand was found to have a moderate positive correlation between the two variables.

5.2.5 Training and development spend per capita and ROE

Hypothesis 5 – Training and development spend per capita has a positive impact on return on equity (ROE) of a bank

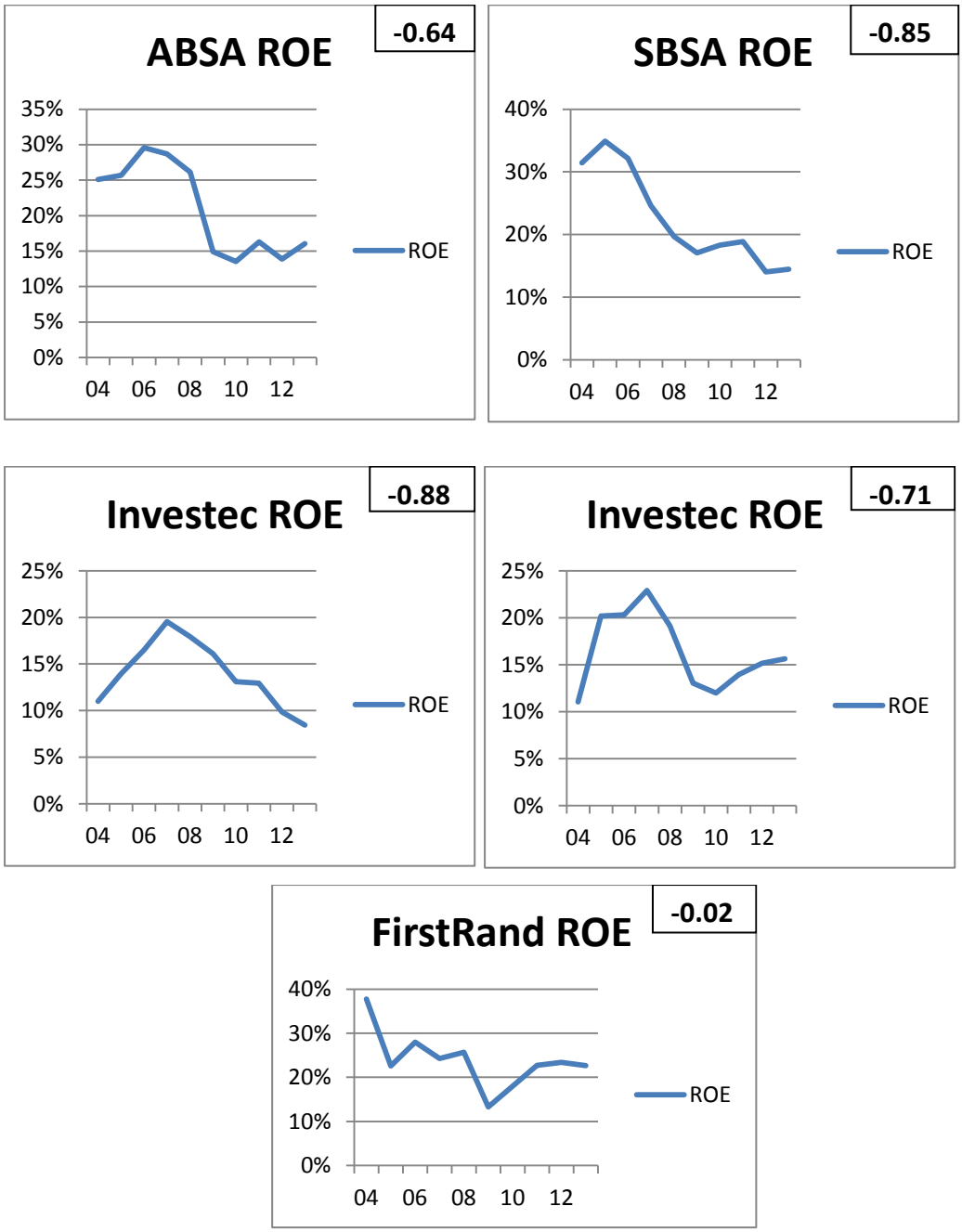
ROEs, as a profitability indicator, measures the amount ordinary shareholders earn for their investment in the business, and are found to have a strong negative correlation (0.80) with training and development spend per capita in the South African banking industry. This suggests that a decrease in ROE in year *n+1* is significantly associated with an increase in training and development spend per capita in year *n*. This is again supported by the trade off and traditional human relations theories as discussed in 5.2.4 above. It was also found that ROE and training and development spend per capita have a slightly stronger negative correlation (0.83) in this industry. This shows that a decrease in training and development spend per capita in year *n+1* is even more associated with an increase in ROE in year *n*. The following diagram displays an overview of ROEs for the SA's banking industry:

Figure 12: Banking Industry ROE overview



Contrary to hypothesis 5 that suggests a positive correlation between training and development spend per capita and ROE, it is found that a negative correlation exists between the two variables in the South African banking industry. This suggests that even though there's a strong positive correlation between training and development spend and revenue as well as net profit, over investment in training and development spend could have a negative impact on value creation of a company for its investors. As investors use ROE to measure how effectively is their investment is used. Training and development can be seen as an expense that reduces profits and therefore return on investment.

Figure 13: Banks' Training and Development Spend per Capita and ROE



The individual correlations of training and development spend and ROE for the different banks were found to be strong and negative, with the exception of FirstRand that was found with no correlation (-0.02) between the two variables. As explained in 5.2.1 above, post the financial crisis banks changed focus to unsecured lending that has high margins, and increased the prices for secured lending after a period of under-pricing. This resulted in significant increase in revenues in the banking industry, and therefore increasing ROEs.

FirstRand, consistently increased its training and development spend, but not at a rate revenue was increasing and therefore the training and development spend could be seen as insignificant from a cost and earnings point of view. FirstRand post the financial crisis grew market share in retail banking, from the customers that moved from ABSA as a result of ABSA's strategy to reduce lending. This increased revenue and margins significantly for FirstRand (Macquarie Research, SA Banking sector report, 2015). Different banks took on different strategies and organisational change that presented different results. There is also the possibility of overinvestment in human capital that may hinder value creation for companies (Weiland and Flavel, 2015). The authors also cautioned the possibility of management cutting human capital investment during times of tough financial performance, when management remuneration is linked to short-term profitability and returns for investors (Weiland and Flavel, 2015).

5.2.6 Training and development spend per capita and Cost to income ratio

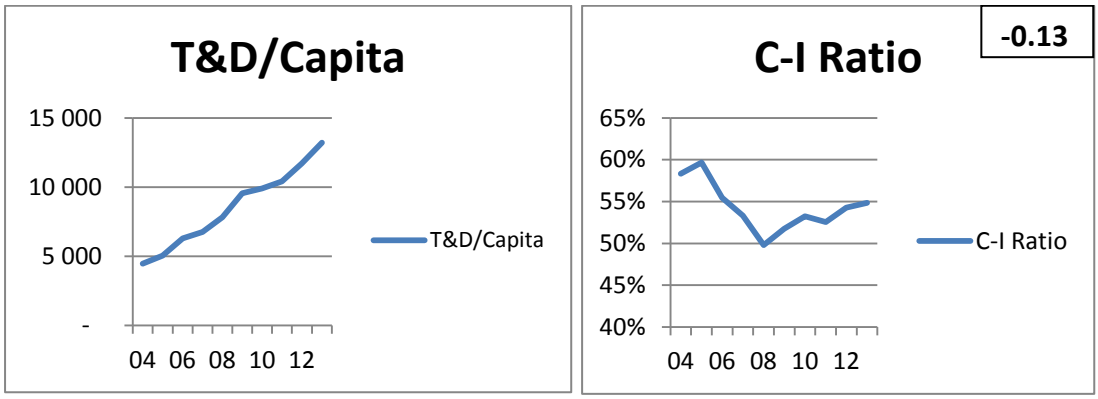
Hypothesis 6 – Training and development spend per capita has a negative impact on Cost to income ratio of a bank

The cost to income ratio measure the efficiency of a bank by measuring the company's operating costs as a percentage of income. This measure is different from net interest as it includes all operating costs with the exception of interest expense. Therefore, the cost of training and development is included in the ratio.

A very weak negative correlation (0.13) was found between training and development spend per capita and cost to income ratio in the banking industry in South Africa. This means that a change in cost to income ratio in year *n+1* is not associated with the change in training and development spend per capita in year *n*. However, a stronger negative correlation (0.33), even though weak, is found between cost to income ratio and training and development spend per capita. This suggests that an increase training and development spend per capita in year *n+1* is, to some extent, associated with a decrease in cost to income ratio in year *n.* The declining cost to income ratio can indicate that revenue has increased at a higher rate, if not constant, than cost. It could also indicate that banks have reduced costs at a higher rate than increase in revenue. Management could view the

lower cost to income ratio as a positive indicator and make a decision to increase training and development spend. The following diagram displays an overview of cost to income ratio for the SA's banking industry:

Figure 14: Banking Industry Cost to Income ratio overview



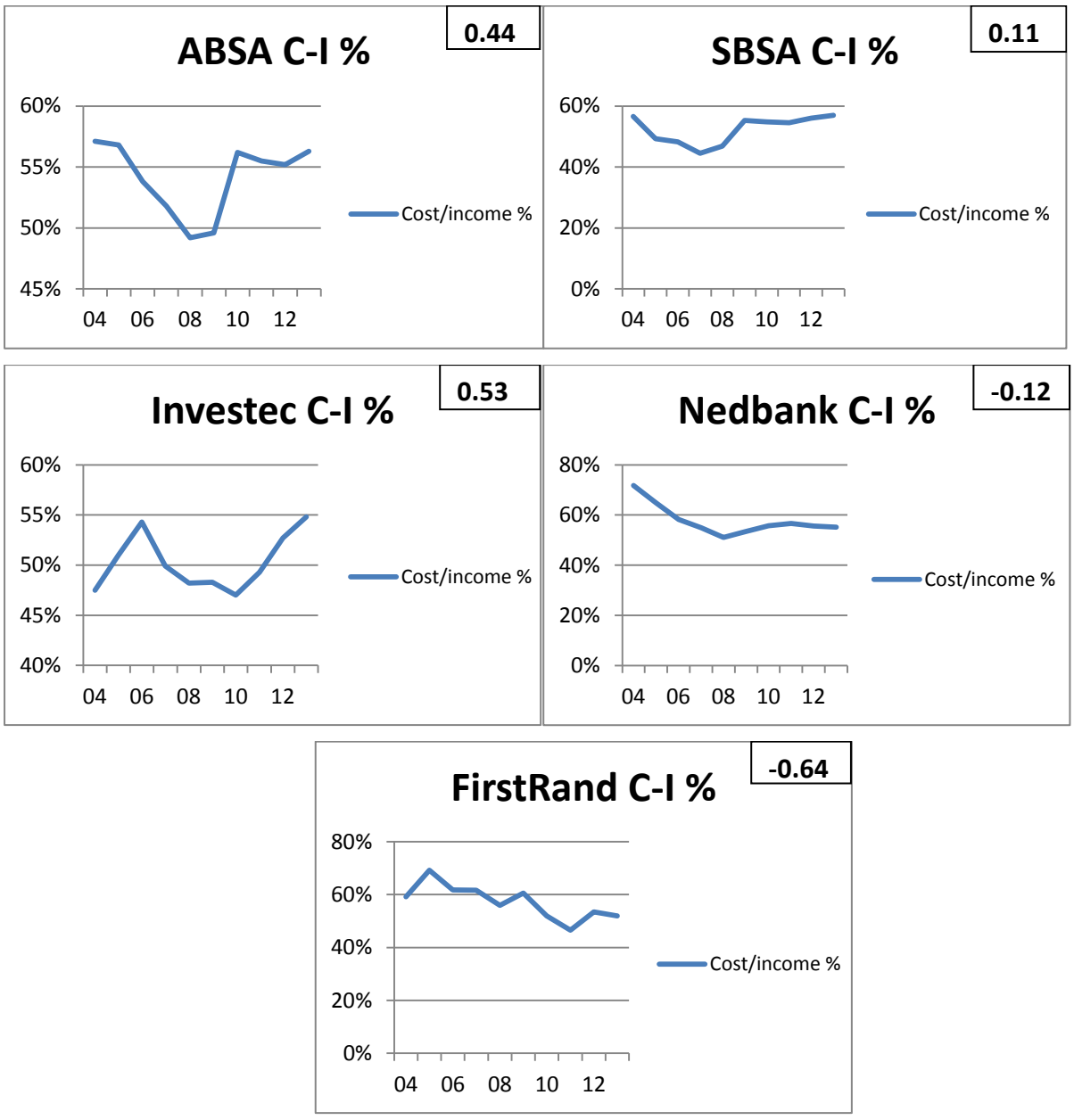
The individual correlations of training and development spend and cost to income ratios for the different banks varies from negative to positive and weak to moderate correlations, mainly due to different strategies and organizational change that banks employ to either increase revenue or cut costs. As mentioned earlier in 5.3.4, ABSA embarked on an expansion strategy that saw the company increasing staff complement and costs, while revenue was decreasing. Increasing costs at a rate higher than revenue would result in a higher cost to income ratio. This could be the reason for the moderate positive correlation (0.44) between training and development spend and cost to income ratio for ABSA. FirstRand is the only bank that reduced cost to income ratio significantly in the later years due significant revenue growth than cost containment, according to Macquarie Research, SA Banking sector report (2015).

SBSA has been the best that displayed more resilience in constraining costs, while it also has the weakest revenue growth compared to other banks. A consideration of the possibility of overinvestment in human capital in some of the banks that could potentially increase costs and hinder value creation should also be taken into consideration (Weiland and Flavel, 2015).

Investec has also increased its training and development spend considerable over the years, although revenue was not increasing at the same rate. This can be seen on the sharp increase of cost to income ratio graph of Investec. As well as the possibility of management cutting human capital investment during times of tough financial performance,

when management remuneration is linked to short-term profitability and returns for investors (Weiland and Flavel, 2015). The following diagrams present an overview of cost to income ratios for the different banks and their correlation with training and development spend per capita:

Figure 15: Banks' Training and Development Spend per Capita and Cost to income ratio



This finding also supports the trade-off and traditional human relations theories that indicate that human resources activities and financial performance are negatively correlated (Weiland and Flavel, 2015). The authors suggest that human capital investment activities

such as training and development spend increase costs and hinder value creation of a company (Weiland and Flavel, 2015). This also supports the suggestion that even though there's a strong positive correlation between training and development spend and revenue as well as net profit, training and development spend is also seen as a cost and have a negative impact on value creation of a company.

5.2.7 Summary of deliberations pertaining to Research Question 1

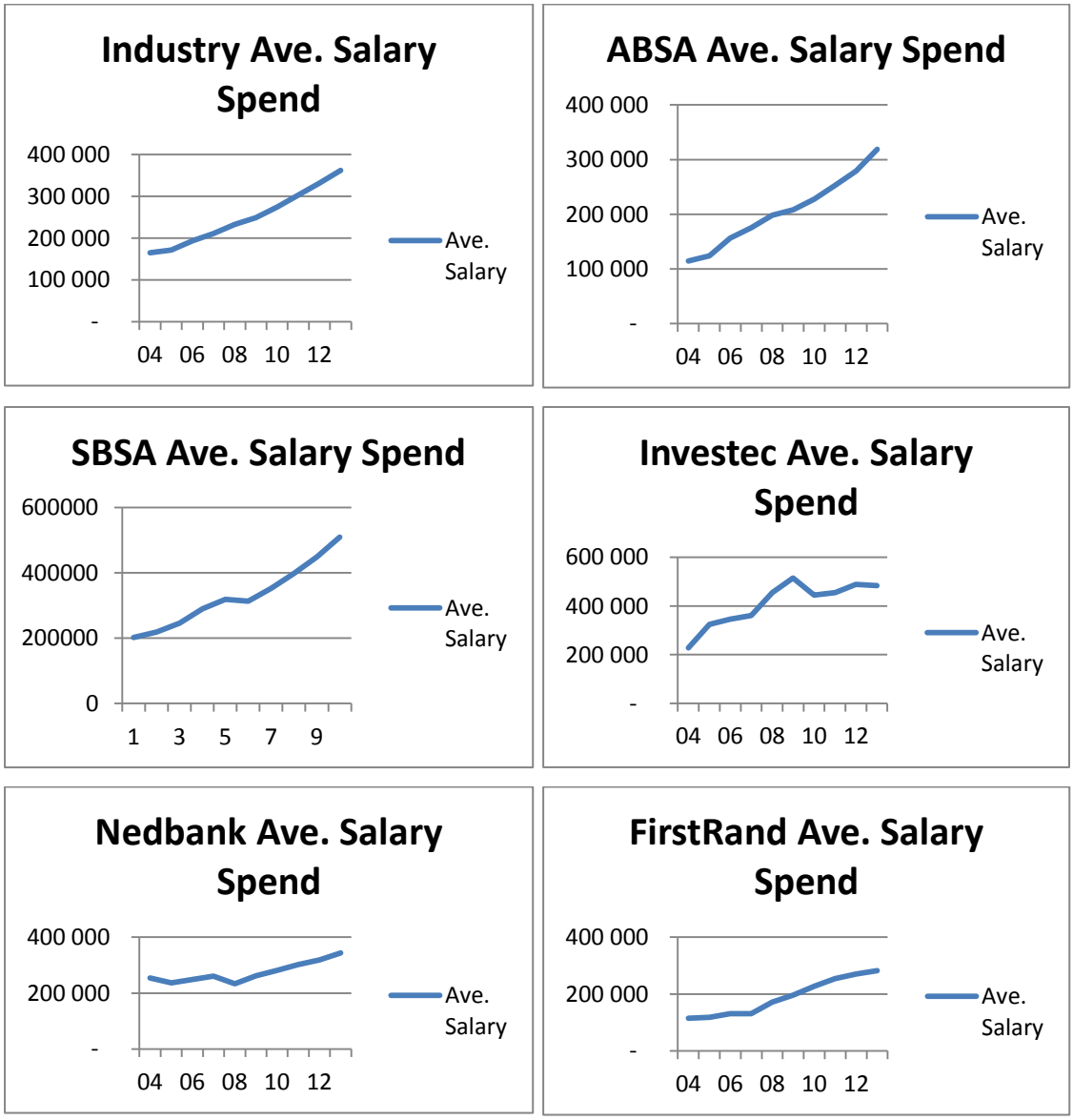
The results of the study to this point reflects that correlation of training and development spend per capita with financial performance is subject to the indicator that has been selected to represent the performance. Strong positive correlations were found between the variable and revenue, net interest and net profit. Furthermore, it was also found that the correlations between training and development spend per capita and these indicators are reciprocal. This suggest that not only an increase in these indicators in year *n+1* is associated with an increase in training and development spend per capita in year *n*, but an increase in training and development spend per capita in year *n+1* is also associated with an increase in revenue, net interest and net profit in year *n*. This finding supports the slack resource theory that suggests that a company that indicates high financial performance has more resources available to invest in staff related activities (Weiland and Flavel, 2015). It also supports the suggestion by Aburgre and Adebola (2015) that training and development has a significant relationship with employees' performance, and consequently the performance of banks. Strong negative correlations were found between training and development spend per capita and ROA and ROA. This is potentially due to the fact that training and development spend is also viewed as an expense that if over-invested in can hinder value creation. This view suggests that training and development spend per capita reduces earning for investors. This supports the trade off and traditional human capital theories that suggest that human resources activities and financial performance are negatively correlated (Weiland and Flavel, 2015). The authors suggest that human capital investment activities such as training and development spend increase costs and hinder value creation of a company.

5.3 Research Question 2

Staff expenses consists approximately 55% of total costs in the banking industry. According to Macquarie Research, SA Banking sector report (2015), salary costs increase at a similar rate for all the banks due to the influence of the trade unions. Salary growth is approximated at 7% in 2015. Researchers, such as Weiland and Flavel (2015), and banking industry analysts such as Macquarie in their SA Banking sector report (2015) agree that the profitability of banks has significant impact on the spend on staff. This is because banks in South Africa offer large incentive schemes to motivate and retain skilled staff. However, banks differ in the level of compensation and incentives they offer their staff (Macquarie Research, SA Banking sector report 2015). According to this report FirstRand is on top of the list offering higher variable compensation, followed by Nedbank. ABSA and Standard Bank have reduced their staff complete and profitability compared to FirstRand and Nedbank, and therefore also showing reduced compensation levels. Based on financial reports, Investec comes second after FirstRand with high variable compensation levels.

The following diagrams give an overview of average salary spend for the banking industry and the 5 banks that were analysed. Diagrams for financial performance are provided and discussed in the relevant sub-heading, with the specific correlations included in small boxes on the diagrams.

Figure 16: Banks' Average Salary Spend overview



Compensation as another element of human capital investment is regarded as one of the key drivers of motivation and increased performance (Schultz 1961). The banking industry average salary spend diagram is an upward slope showing an increase over the years in the variable. The individual banks diagrams show different picture, with ABSA and SBSA displaying a steady increase similar to that of the industry throughout the years. Investec, Nedbank and FirstRand slopes show a slight decline in the 2007 to 2008 period of the global financial crisis. Post the global crisis, Nedbank and FirstRand show significant increases in average salary spend, while Investec increased in the 2009 to 2010 period, and decrease shows an increase and a decreased thereafter. A strong competition for skilled and experienced employees within this industry, and therefore salary levels are one

of the key drivers of employee satisfaction and retention in the South African banking industry. The Macquarie Research, SA Banking sector report (2015) suggests that the variable portion of salary levels that is linked to the performance of the bank is the biggest driver than the fixed salaries. The report further suggests that banks with high performance such as FirstRand and Investec have high variable salary level, and incentivize their employees by giving them higher salary increases. While banks that have showed less performance in the years, such as ABSA give less variable compensation

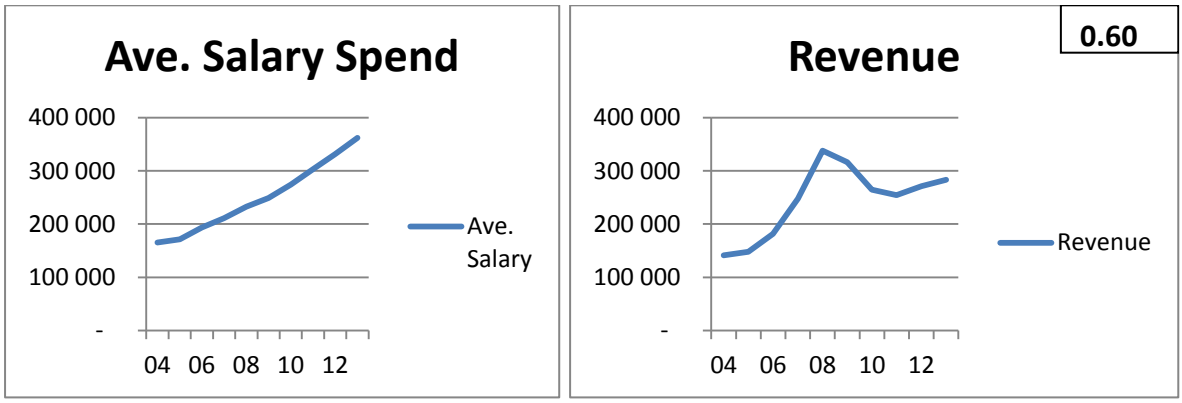
5.3.1 Average salary spend and revenue

Hypothesis 7 – Average salary spend has a positive correlation to revenue (interest and non-interest (fees) revenue) of a bank.

A moderate positive correlation (0.60) was found between average salary spend and revenue in the South African banking industry. This indicates that an increase in revenue in year *n+1* is, to some extent, associated with an increase in average salary spend in year *n*. This finding supports hypothesis 7 described in chapter 2 which suggests a positive correlation between average salary spend and revenue. It was also found that an increase in average salary spend in year *n+1* is also, to some extent, associated with an increase in revenue in year *n*. The two variables have a moderate correlation of 0.63 that is similar to the correlation of the two variables when average salary spend is the dependent variable. This suggests a reciprocal relationship between average salary spend and revenue.

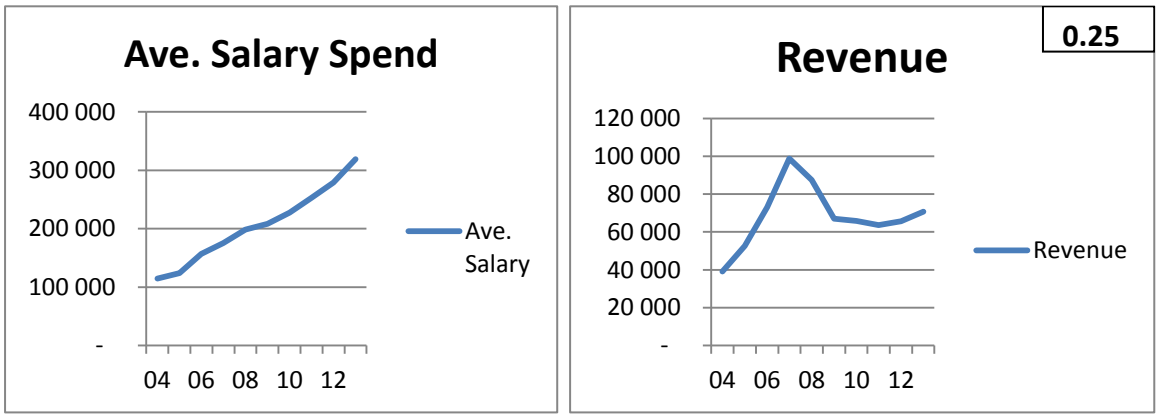
The following diagrams display the overview of average salary spend and revenue in the industry, with their respective correlations in the small boxes:

Figure 17: Banking Industry average salary spend and Revenue



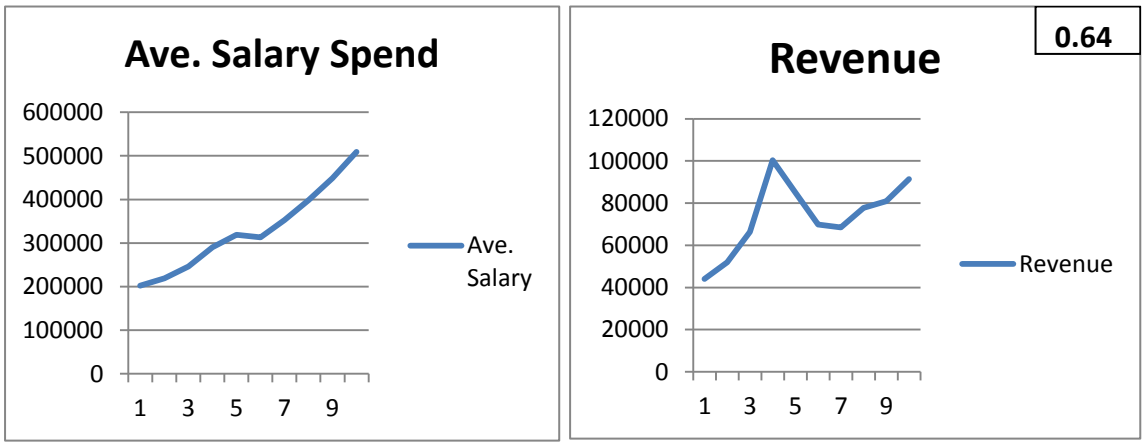
The individual correlations of average salary spend and revenue for the different banks varies from weak to strong correlations, potentially due to different strategies and organisational change that the banks went through during the period. The following diagrams display an overview of the banks' average salary spend and revenue:

Figure 18: ABSA's average salary spend and Revenue



Post the financial crisis, ABSA reduced its lending business and therefore cutting its retail business (losing its market share) significantly that resulted in lower interest income, according to the Macquarie Research, SA Banking sector report (2015). However, the bank did not reduce its operations and staff complement. Later in years the bank took a strategy to increase pricing to increase revenue. The bank has been found to have a week positive correlation between average salary spend and revenue.

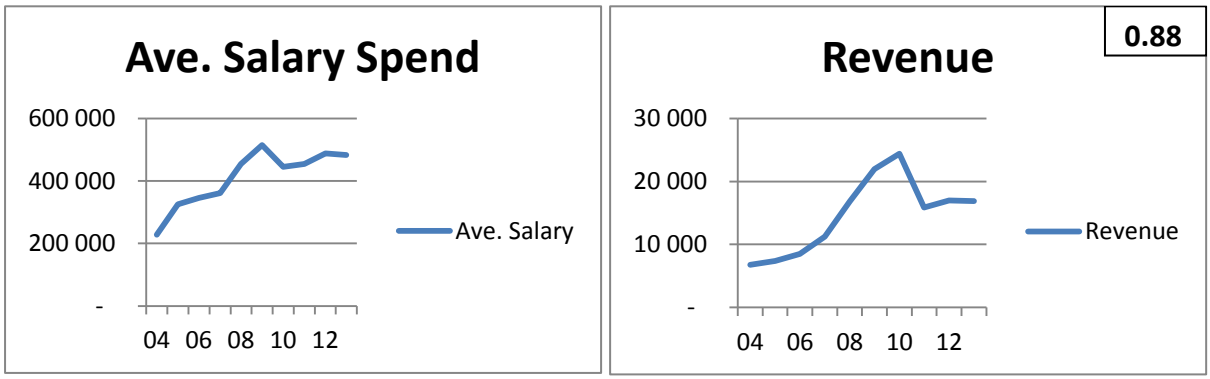
Figure 19: SBSA's average salary spend and Revenue



SBSA has not been as aggressive as FirstRand and Nedbank in increasing revenue. The bank has focused in cost containment in the later years of the analysis. However, post the

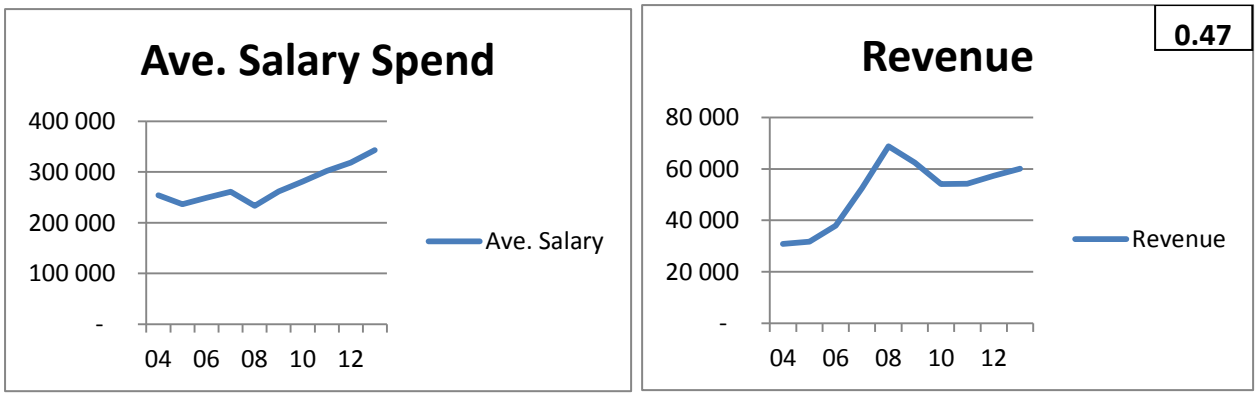
financial crisis, changing focus from only secured lending to unsecured lending as well that has higher margins has shown revenue increase (Macquarie Research, SA Banking sector report, 2015). The bank has been found to have a much stronger positive correlation (0.64) between average salary spend and revenue, compared to ABSA (0.25).

Figure 20: Investec's average salary spend and Revenue



Investec was found to have a strong positive correlation (0.88) between average salary spend and revenue. According to Macquarie Research, SA Banking sector report (2015), it is one of the banks that offer higher variable compensation in the South African banking industry. Its revenue growth has been steady in the earlier years, however started to decline in the later years.

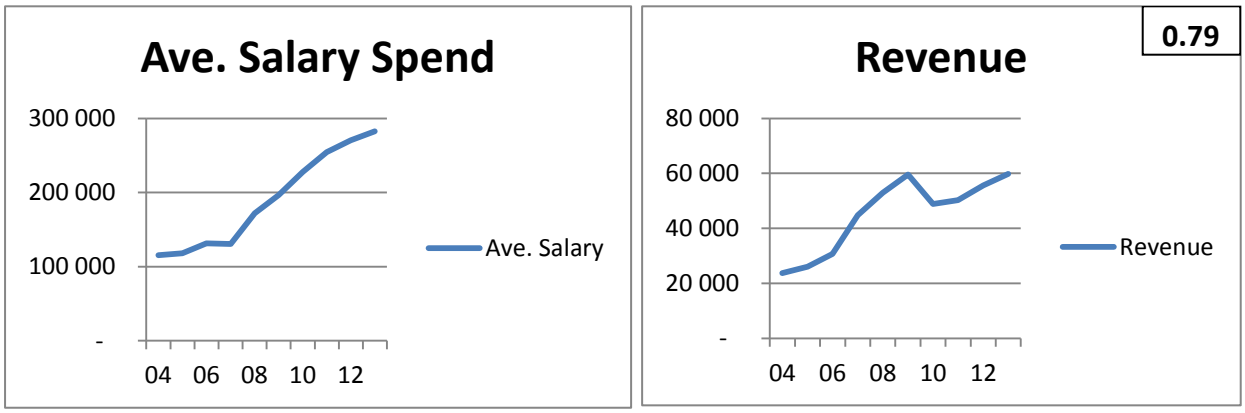
Figure 21: Nedbank's average salary spend and Revenue



Nedbank's focus on its corporate banking business and continued presence to grow retail banking has seen its increase of revenue. This has seen the bank increasing its fee and commission income by 70% in the later years according to, outperforming its peers according to Macquarie Research, SA Banking sector report (2015). This resulted from the re-engineering of the business during the leadership of Mike Brown. The bank has been

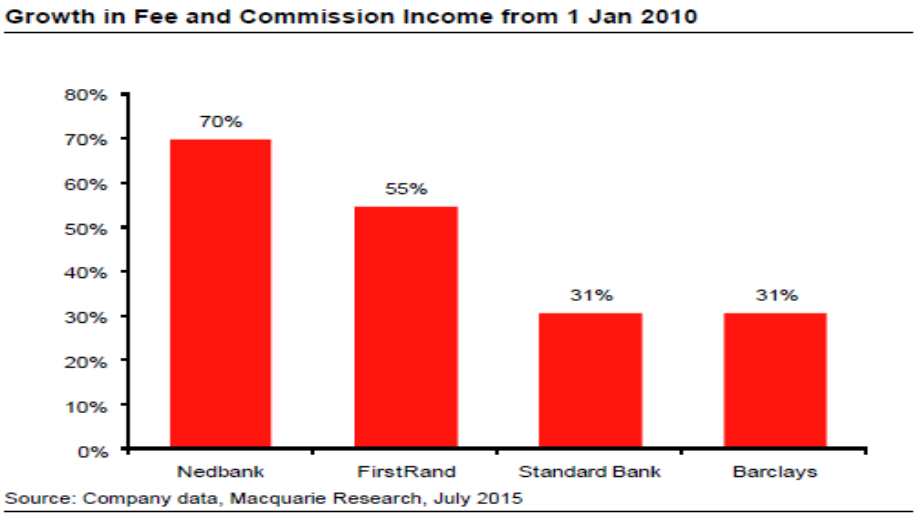
found to have a moderate strong positive correlation (0.47) between average salary spend and revenue. The bank has been reported by Macquarie Research, SA Banking sector report (2015), to be in the lower rankings of level of variable compensation they offer their staff.

Figure 22: FirstRand's average salary spend and Revenue



FirstRand, as the bank that stood out in financial performance compared to other big banks in SA according to Macquarie Research, SA Banking sector report (2015), has been found to have a strong positive correlation between average salary spend and revenue. The analyst reported that the bank presents impressive market share gains and greater margins, and suggested that it is the leader in offering higher levels of variable compensation as a result. This statement supports the finding of an even stronger correlation (0.88) between revenue and average salary spend that suggests that an increase in average salary spend in year *n+1* is associated with an increase in revenue in year *n*. The following diagram provides an overview of fee and commission income that is the main source of income from operations:

Figure 23: Overview of Growth in Fee and Commission income

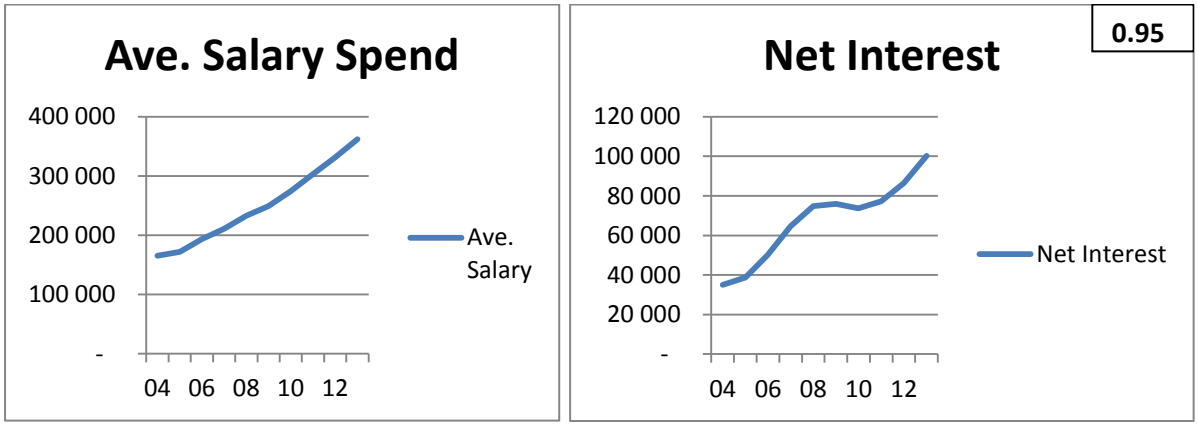


5.3.2 Average salary spend and net interest

Hypothesis 8 – Average salary spend has a positive impact on net interest of a bank

In support of hypothesis 8, average salary spend and net interest have been found to have a strong positive correlation (0.95). This suggests that an increase in net interest in year n+1 is significantly associated with an increase in average salary spend in year n. the following diagram shows an overview of net interest:

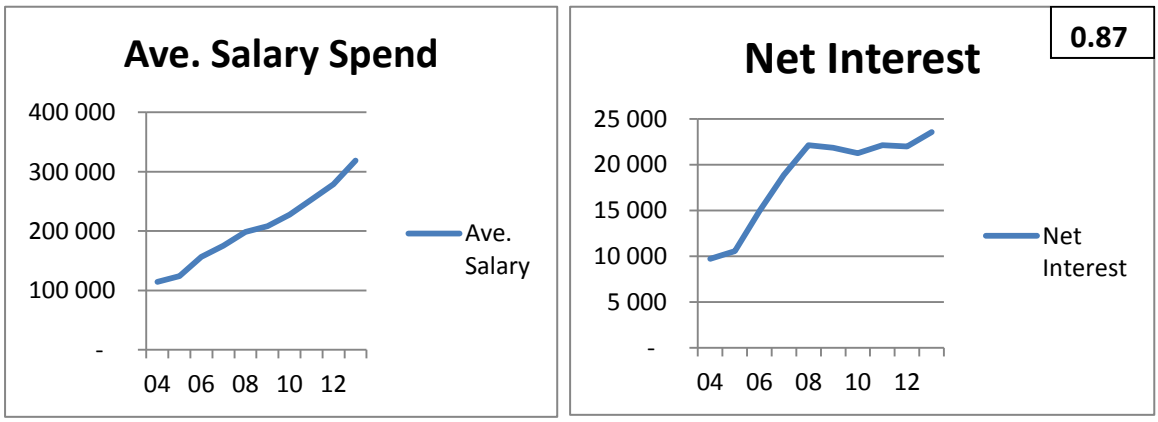
Figure 24: Banking Industry Net Interest overview and ave. salary spend



It was also found that an increase in average salary spend in year *n+1* is also significantly associated with an increase in net interest in year *n*. The two variables have a strong correlation of 0.93 that is similar to the correlation of the same variables when average salary spend is the dependent variable. This suggests a reciprocal relationship between average salary and net interest. The individual correlations of average salary spend and net

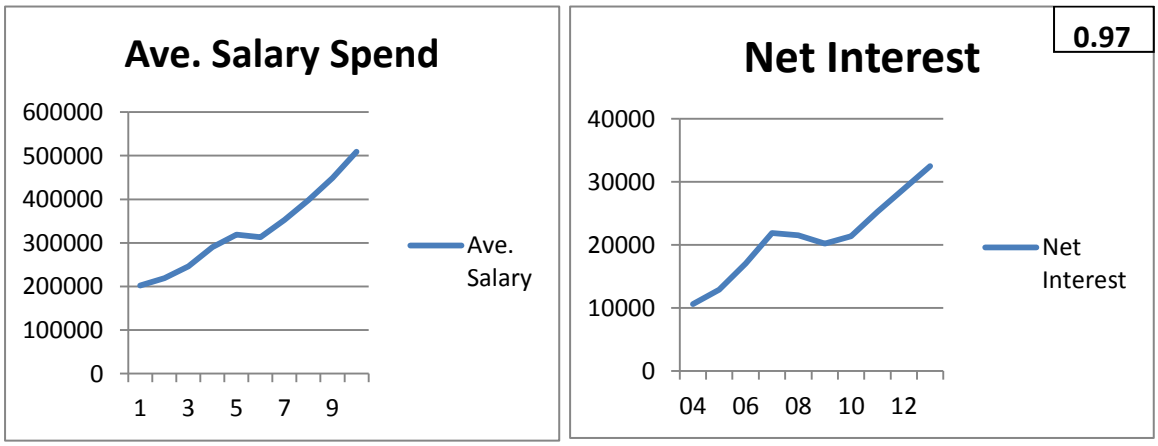
interest for the different banks were all found to be strong and positive, regardless of differences in strategies and organisational changes. Macquarie Research, SA Banking sector report (2015) reported that the industry has experienced a stronger growth in corporate credit compared to household credit. The ability for banks to scan the environment and quickly adapt to changing environment is critical to the success of the banks (Aburgre and Adebola, 2015).

Figure 25: ABSA's average salary spend and Net interest



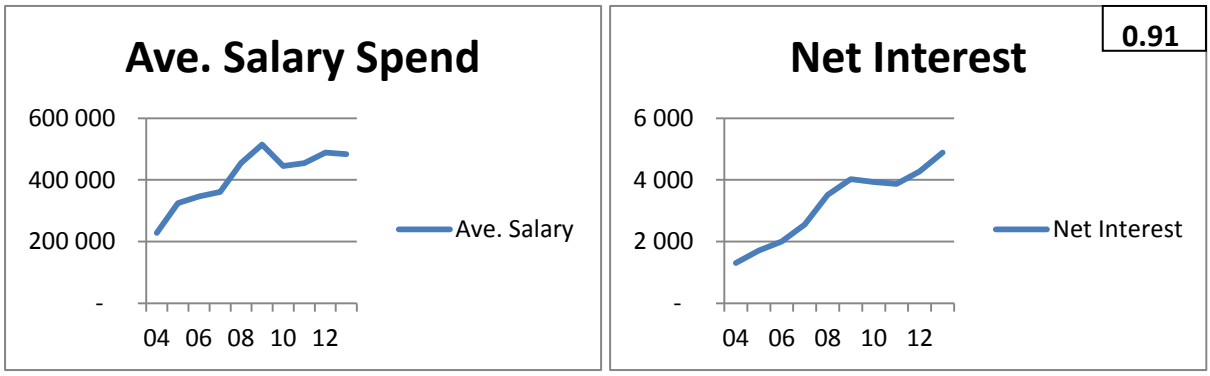
ABSA was found to have a strong positive correlation (0.87) between average salary spend and net interest. The bank, according to Macquarie Research, SA Banking sector report (2015) underperformed compared to the other banks on loan growth and as a result lost market share. This correlation suggests that an increase in net interest in year *n+1*, is to a certain extent, associated with an increase in average salary spend in year *n* for the bank.

Figure 26: SBSA's average salary spend and Net interest



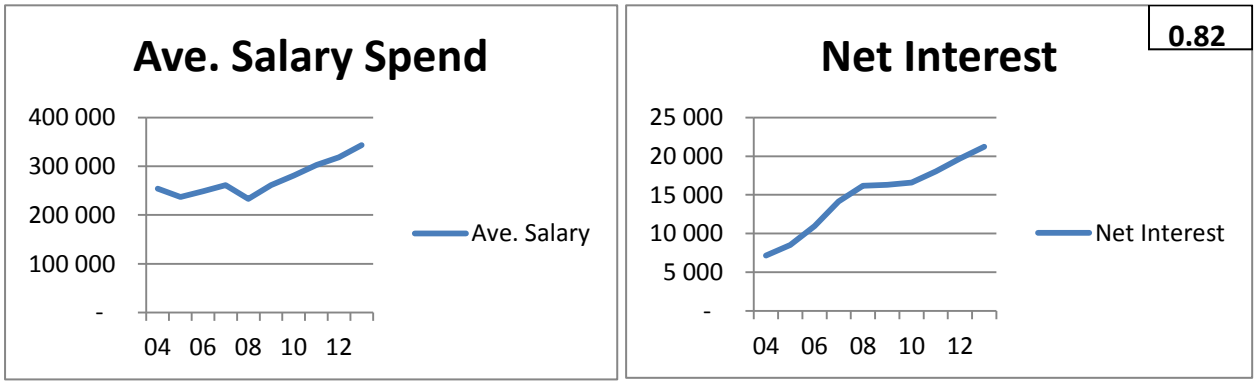
Similarly, to ABSA, SBSA was also found to have a strong positive correlation (0.97) between average salary spend and net interest, although the bank has a stronger correlation. SBSA embarked on a strategy to increase training and development spend in line with the technology (software) developments that the bank initiated (Macquarie Research, SA Banking sector report, 2015). This correlation suggests that an increase in net interest in year *n+1*, associated with an increase in average salary spend in year *n* for the bank.

Figure 27: Investec's average salary spend and Net interest



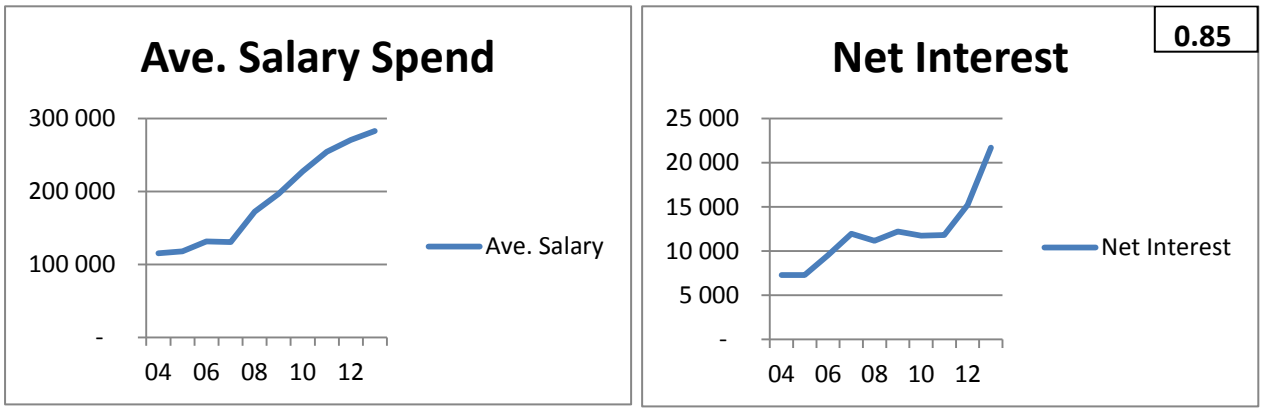
Investec also presented a strong positive correlation (0.91) between average salary spend and net interest, although the bank has a stronger correlation to ABSA, Nedbank and FirstRand, it is less than that of SBSA. As described for ABSA, this correlation suggests that an increase in net interest in year *n+1* is, associated with an increase in average salary spend in year *n* for the bank. Furthermore, it is supported by Weiland and Flavel (2015), who suggest that employee orientation activities, including training and development, increases employee motivation and loyalty to company and its customers, and thus productivity and financial performance.

Figure 28: Nedbank's average salary spend and net interest



Nedbank was found to have a strong positive correlation as indicated on the above diagram, indicating the strong association between the variables as explained for the other banks above. All the banks' correlations between the two averages were found to be strong and positive.

Figure 29: FirstRand's average salary spend and net interest



The correlations support hypothesis 7 discussed in chapter 2, that suggests a positive correlation between average salary spend and net interest. As deliberated on, this finding is also supported by by Weiland and Flavel (2015), who suggest that employee orientation activities, including training and development, increases employee motivation and loyalty to company and its customers, and thus productivity and financial performance.

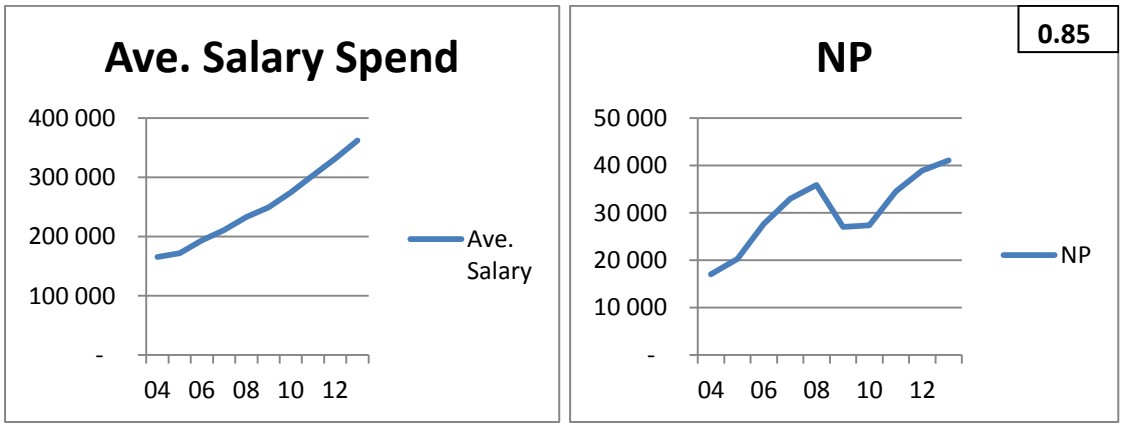
5.3.3 Average salary spend and net profit

Hypothesis 9 – Average salary spend has a positive impact on Net Operating Profit of a bank

The banking industry was negatively impacted by the global financial crisis, and presented less margins during the period due to the change in focus to only secured credit that was also under-priced, and this is seen on the dip of the graph on the diagram below. Post the crisis, the industry changed focus to unsecured lending that has high margins and corrected the pricing of secured lending. This is resulted in the increase in revenues and improved profitability of the banks. In support of hypothesis 9, as discussed in chapter 2, average salary spend and net profit was found to have a strong positive correlation (0.85). This suggests that an increase in net profit in year *n+1* is significantly associated with an

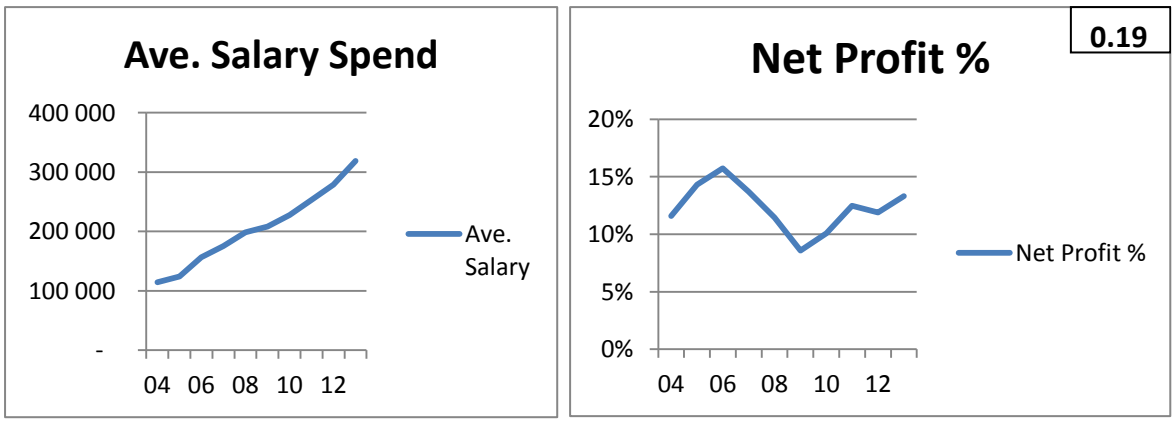
increase in average salary spend in year *n*. the following diagram shows an overview of net profit for the banking industry:

Figure 30: Banking Industry average salary spend and net profit



It was also found that an increase in average salary spend in year *n+1* is also significantly associated with an increase in net profit in year *n*. The two variables have a strong correlation of 0.82 that is similar to the correlation of the same variables when average salary spend is the dependent variable. The individual correlations of average salary spend and net interest for the different banks were all, with an exception of ABSA, found to be strong and positive, regardless of differences in strategies and organizational changes. ABSA Bank was found to have a weak positive correlation of 0.19. The following diagrams:

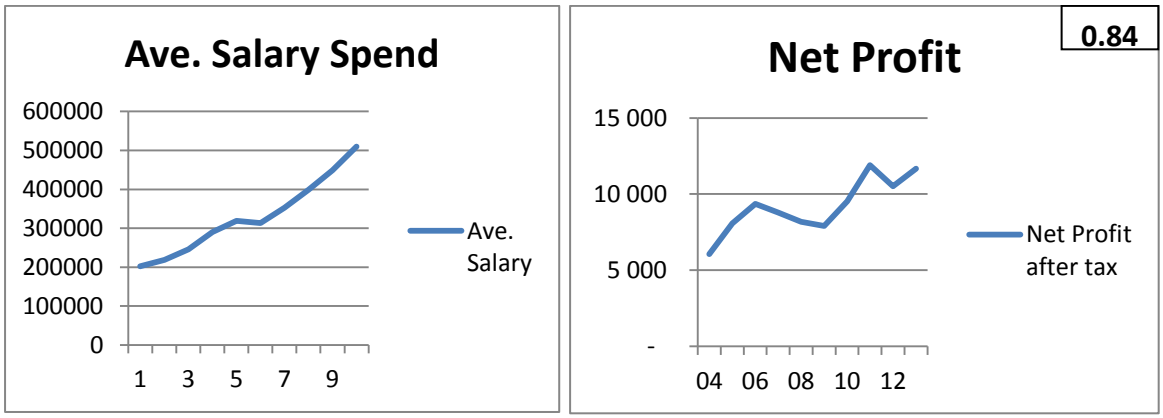
Figure 31: ABSA's average salary spend and net profit



The weak positive correlation for ABSA suggests that an increase in net profit in year *n+1* is, to a minimal extent, associated with an increase in average salary spend in year *n*. In comparison with the bank (FirstRand) that is sitting on the top position of the top 4 banks in South Africa, according to Macquarie Research, SA Banking sector report (2015), ABSA

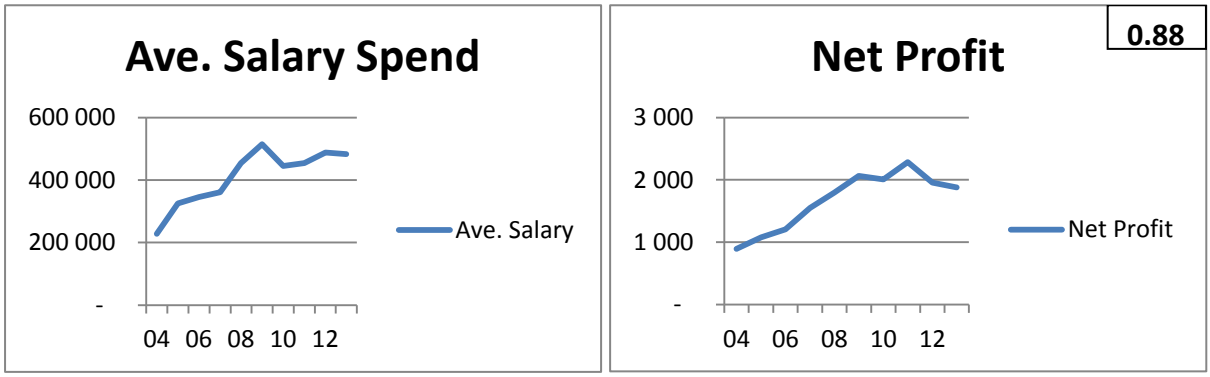
underperformed compared to its peers due to the loss of revenue without cutting costs, significantly impacting on profitability, as seen on the diagram above.

Figure 32: SBSA's average salary spend and net profit



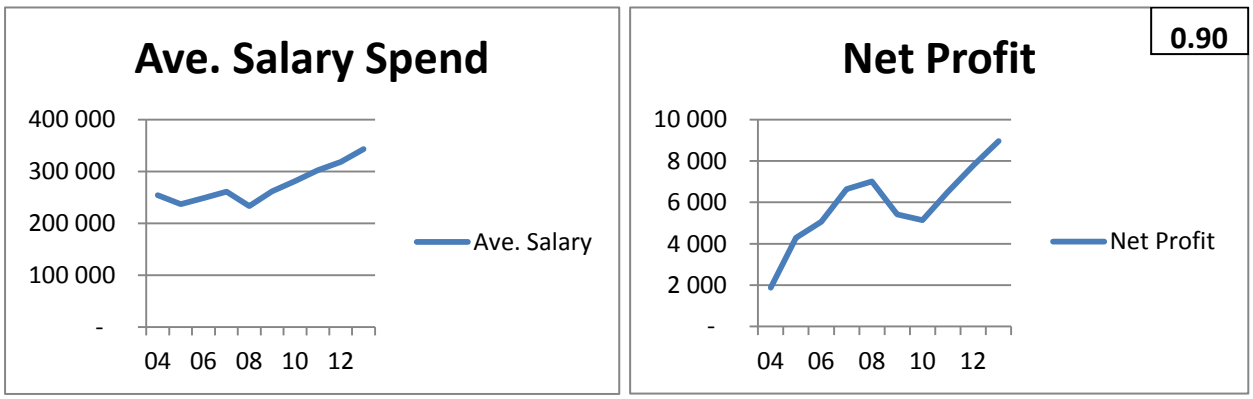
All the other banks were found to have strong positive correlation between average salary spend and net profit. This indicates that in all the banks except ABSA, an increase in net profit in year *n+1* is associated to an increase in average salary spend in year *n*.

Figure 33: Investec's average salary spend and net profit



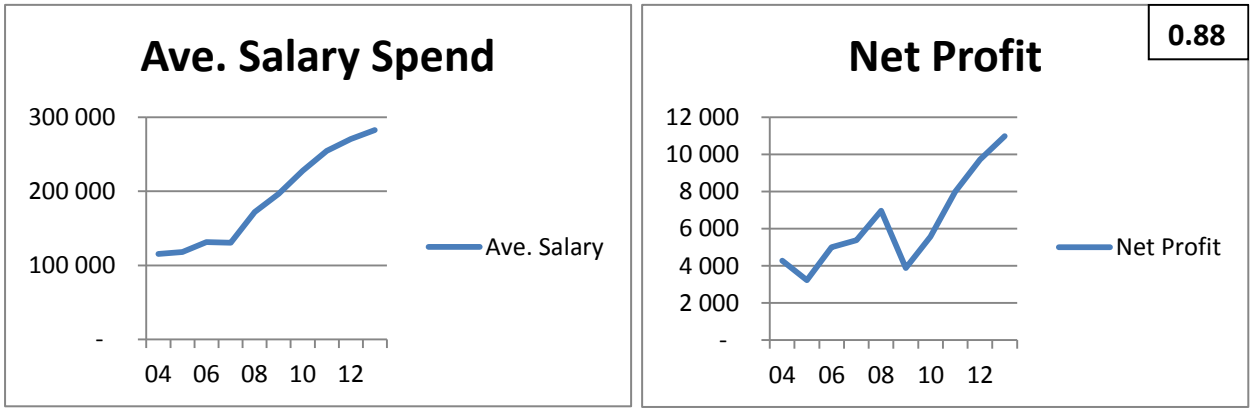
The finding is also supported, as deliberated on indicators that are related to production and profitability, by Weiland and Flavel (2015), who suggest that employee orientation activities, including training and development, increases employee motivation and loyalty to company and its customers, and thus productivity and financial performance.

Figure 34: Nedbank's average salary spend and net profit



Nedbank is the second best performer in terms of margin after FirstRand (Macquarie Research, SA Banking sector report, 2015). The bank has not enjoyed the rate of growth as FirstRand mainly because of its focus on corporate banking, but maintains almost same presence as standard bank in terms of branches and other retail distribution channels. This results in high operating costs for branches and staff, even though their retail banking is small. FirstRand, on the other hand increased its retail customer base with innovative products and the graphs displays the increase in profitability and average salary spend over the period.

Figure 35: FirstRand's average salary spend and Revenue



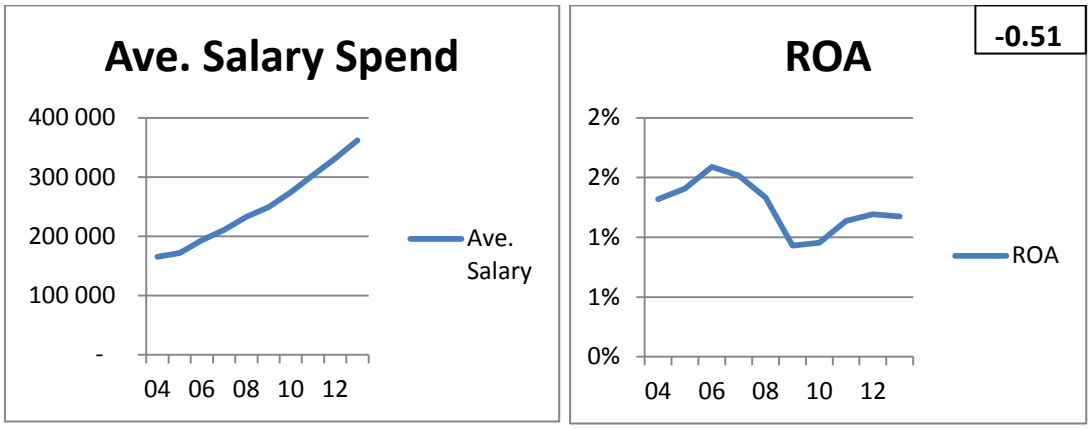
These findings support hypothesis 8 discussed in chapter 2, that suggests a positive correlation between average salary spend and net profit. As deliberated on, this finding is also supported by by Weiland and Flavel (2015), who suggest that employee orientation activities, including training and development, increases employee motivation and loyalty to company and its customers, and thus productivity and financial performance

5.3.4 Average salary spend and Return on Assets

Hypothesis 10 – Average salary spend has a positive impact on return on assets (ROA) of a bank

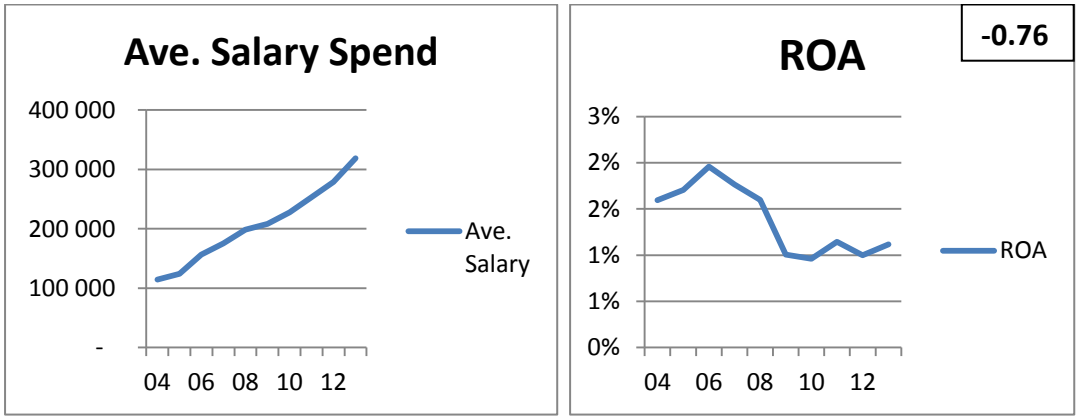
ROAs in the banking industry declined and starting expansion in the later years with FirstRand and Nedbank leading the pack, while ABSA and SBSA following. Investec's ROA show a declining trend over the years. ABSA and SBSA show higher rates of improvements in their ROAs, mainly due to weak performance in the earlier years. According to Macquarie Research, SA Banking sector report, 2015 ABSA and SBSA are generating earnings below historic average, while FirstRand and Nedbank have made head way. Contrary to hypothesis 10, as discussed in chapter 2 of this report, the banking industry has been found to have a moderate negative correlation between average salary spend and ROA. The following diagram presents an overview of the two variables and their correlation:

Figure 36: Banking Industry average salary spend and ROA



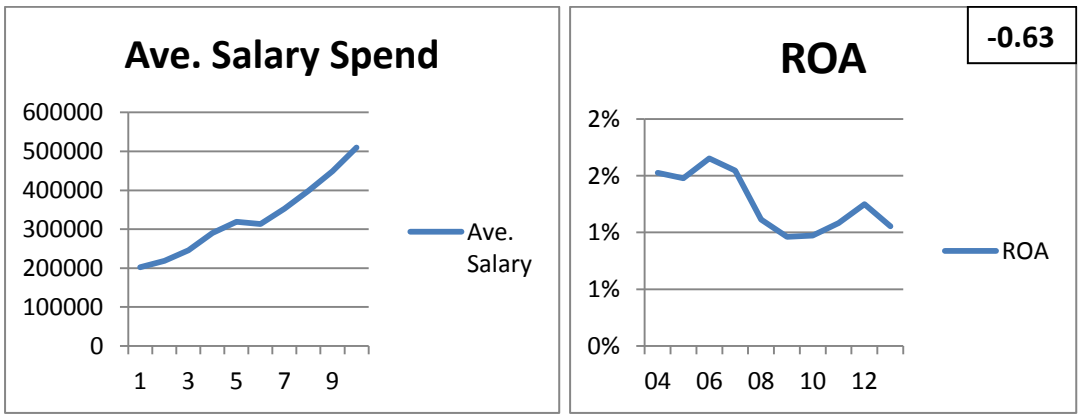
This finding suggests that an increase in ROA in year *n+1* is to a certain extent associated with a decrease in Average Salary spend in year *n*. ROA increases when management put efforts on growing the business than dealing with non-performing operations (Macquarie Research, SA Banking sector report, 2015). The individual correlations of average salary and ROA for the different banks range from moderate to strong negative correlations. This is because different banks embark on different strategies and major changes. A consideration of overinvestment in human capital may hinder value creation for companies should also be made (Weiland and Flavel, 2015).

Figure 37: ABSA's average salary spend and ROA



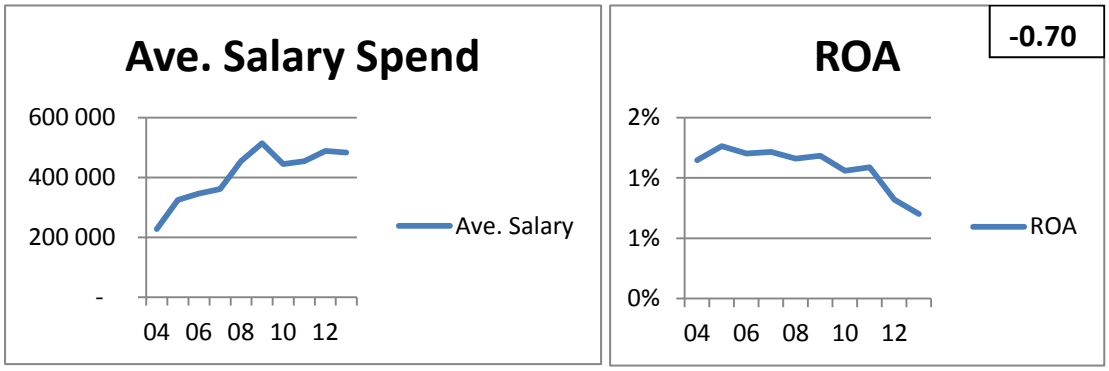
ABSA was found to have a strong negative correlation between average salary spend and ROA. This suggests that an increase in ROA in year *n+1* is to a certain extent associated with a decrease in average salary spend in year *n*.

Figure 38: SBSA's average salary spend and ROA



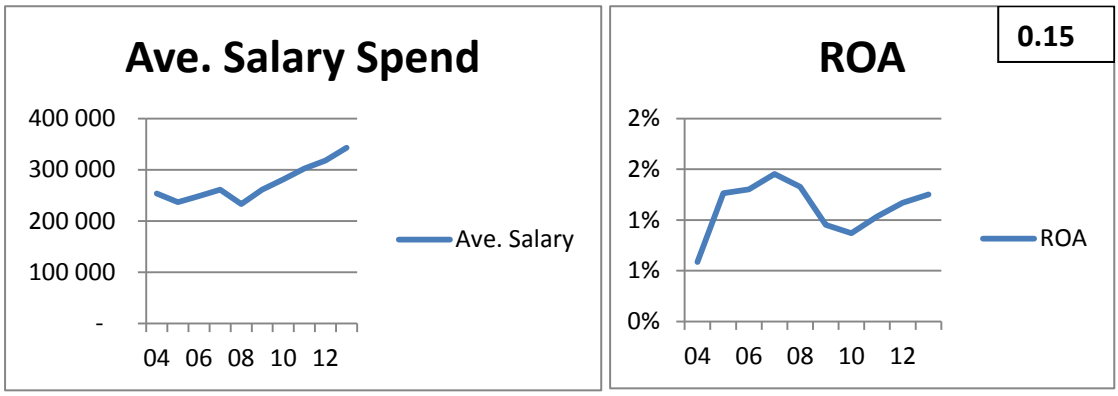
SBSA was also found to have a strong negative correlation, but less than ABSA, between average salary spend and ROA. This suggests that an increase in ROA in year *n+1* is, to a less certain extent than ABSA, associated with a decrease in average salary spend in year *n*. As mentioned above SBSA and ABSA, according to Macquarie Research, SA Banking sector report 2015, are generating earnings below historic average, but showing more improvement due to under performance in the earlier years. The following diagram presents and overview of average salary and ROA of Investec. Investec's ROAs have been declining over the years as presented on the diagram

Figure 39: Investec's average salary spend and ROA



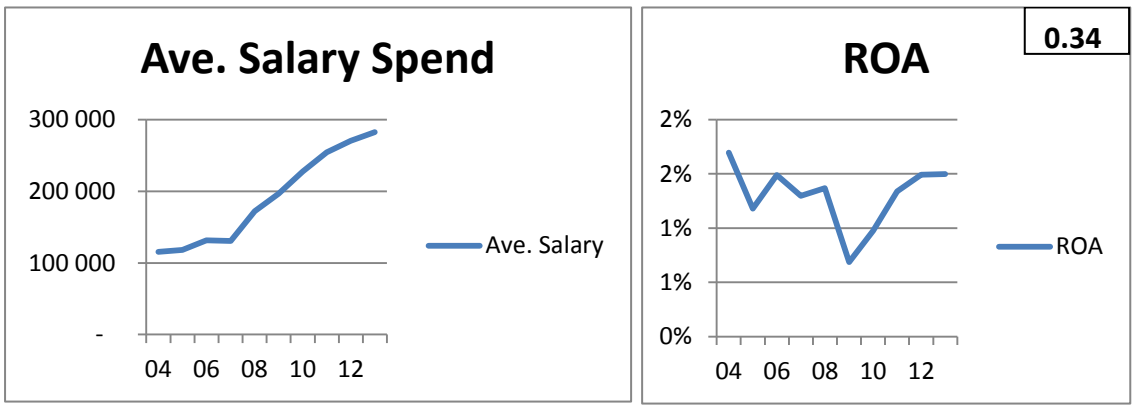
Investec was found also found to have a strong negative correlation between average salary spend and ROA. This supports the finding discussed on ABSA and SBSA. The finding is also supported by the trade-off and traditional human relations theories, as discussed in 5.2.4, that indicate that human resources activities and financial performance are negatively correlated (Weiland and Flavel, 2015).

Figure 40: Nedbank's average salary spend and ROA



While nedbank was found to have a weak positive correlation between average salary spend and ROA. This suggests that an increase in ROA in year n+1 is associated with an increase in average and salary spend. However the correlation is very weak. The following diagram presents an overview of average salary spend and ROA for FirstRand, a bank that is leading on financial performance before Nedbank. FirstRand was also found to have a weak positive correlation, but stronger than Nedbank, between the two variables:

Figure 41: FirstRand's average salary spend and ROA



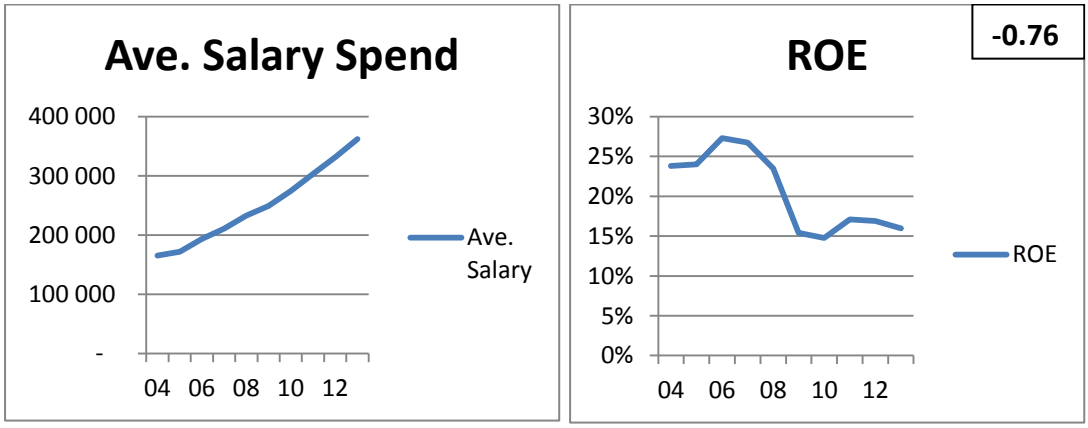
As discussed above, ROA increases when management put efforts on growing the business than dealing with non-performing operations (Macquarie Research, SA Banking sector report, 2015). Contrary to hypothesis nine discussed in chapter two of this report, average salary spend was found to have a moderate negative correlation with ROA.

5.3.5 Average salary spend and ROE

Hypothesis 11 – Average salary spend has a positive impact on return on equity (ROE) of a bank

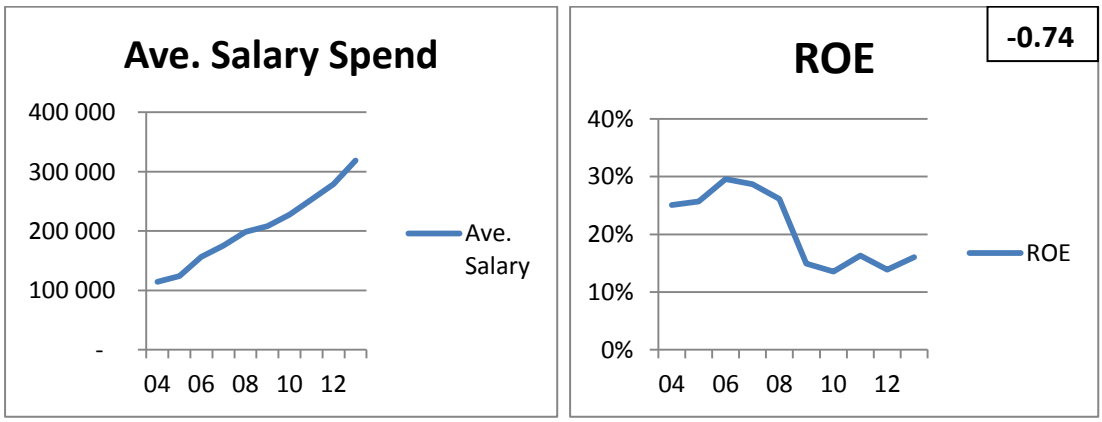
As discussed in 5.2.4 the trade off and traditional human relations theories suggest that human capital spend is a cost that reduces earnings and therefore return on investment for the owners of the business. In this study it was found that the South African banking industry has a strong negative correlation between average salary spend and ROE. This finding supports the two theories; in that it suggests that an increase in ROE in year *n+1* is associated to a decrease in average salary spend in year *n*. The following diagram displays an overview of the average salary spend and ROE for the banking industry, with its correlation.

Figure 42: Banking Industry average salary spend and ROE



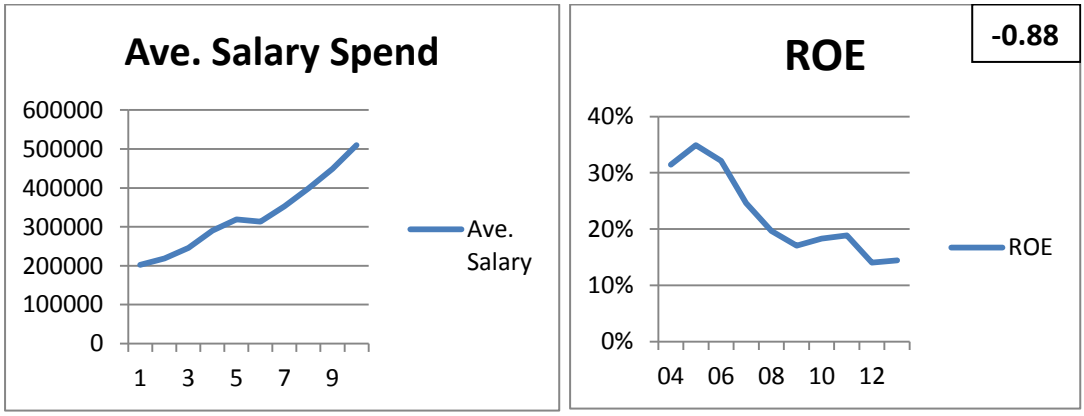
The individual correlations of average salary and ROE for the different banks range from weak to strong negative correlations. This is because different banks embark on different strategies and major changes in the constantly changing environment of the industry. A consideration of overinvestment in human capital may hinder value creation for companies should also be made (Weiland and Flavel, 2015). A consideration for the changes in the market due to global financial crisis should also be made. The following diagrams provide the different banks' overview of average salary spend and ROE, with their correlations.

Figure 43: ABSA's average salary spend and ROE



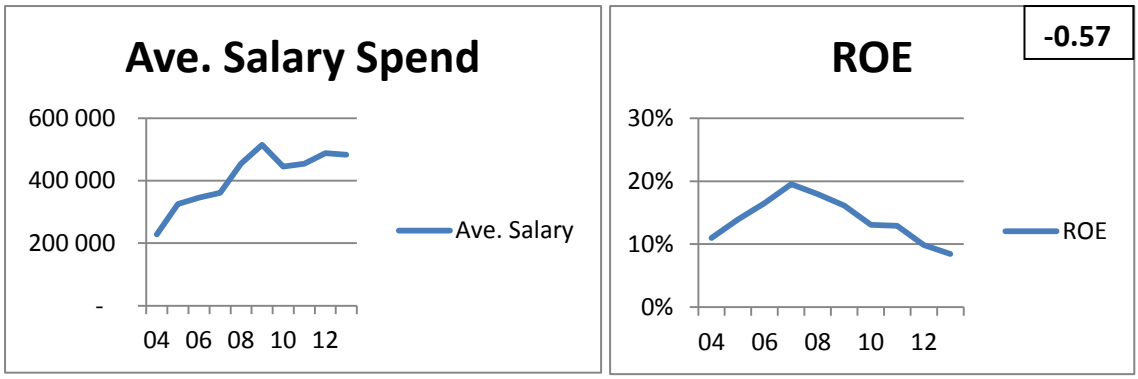
ABSA was found to a strong negative correlation between the two variables, supporting the trade off and traditional human relations theories, and contrary to hypothesis 10. This finding is similar to the finding for SBSA as displayed in diagram below:

Figure 44: SBSA's average salary spend and ROE



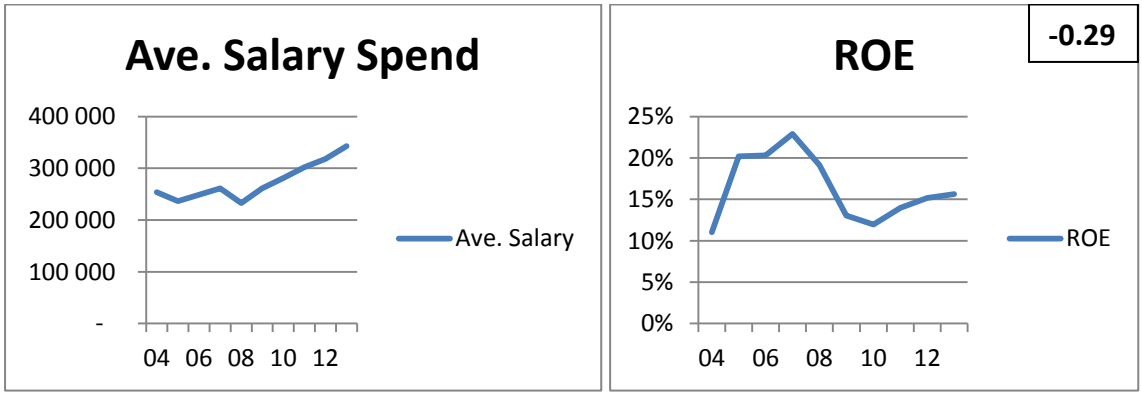
Where SBSA was also found to have a strong negative correlation between average salary spend and ROE, but this correlation is stronger than that of ABSA. While Investec was found to have a moderate negative correlation between the two variables, as displayed in the diagram below:

Figure 45: Investec's average salary spend and ROE



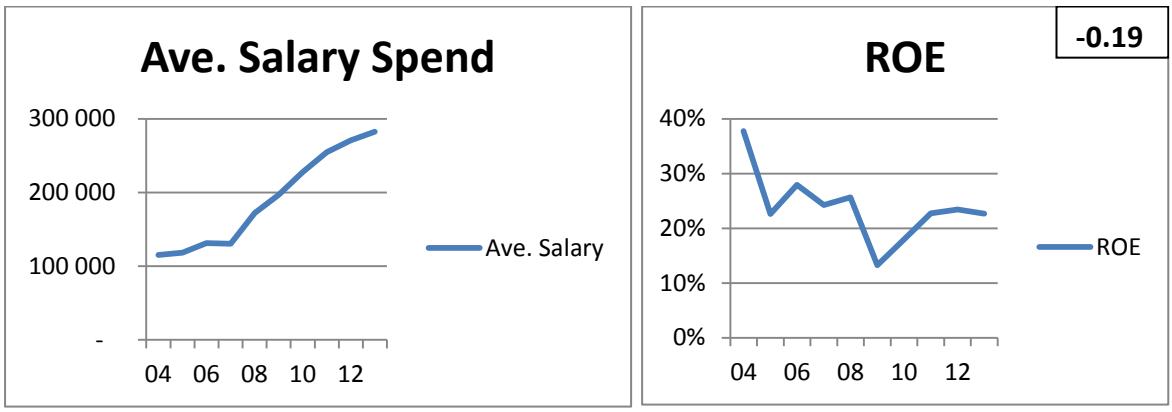
Investec's correlation supports ABSA and SBSA than Nedbank and FirstRand. It was found that nedbank and FirstRand have a weak negative correlation between average salary spend and ROA. This suggests that an increase in ROA in year n+1 is associated with an increase in average and salary spend, supporting the trade off and traditional human relations theories. However the correlation is very weak. The following diagrams presents an overview of average salary spend and ROE for, Nedbank and FirstRand, the banks that have been leading on financial performance in the later years according to Macquarie Research, SA Banking sector report, 2015.

Figure 46: Nedbank's average salary spend and ROE



Nedbank's correlation is stronger than FirstRand's but still weak. Nedbank is the second financial performer after FirstRand, with increased revenues and growing ROEs. The following diagram displays FirstRand's overview of average salary spend and ROE.

Figure 47: FirstRand's average salary spend and ROE



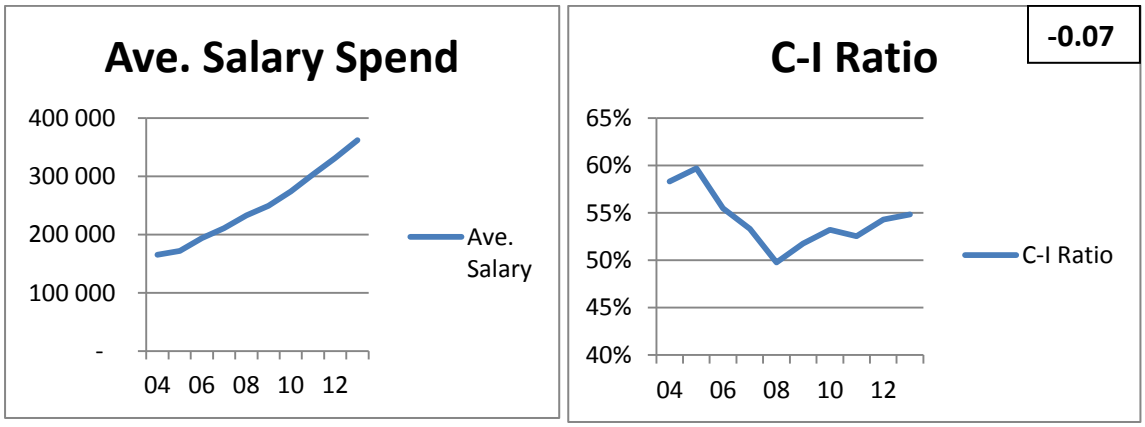
5.3.6 Average salary spend and cost to income ratio

Hypothesis 12 – Average salary spend has a negative impact on Cost to income ratio of a bank

These variables and analysis was discussed in section 5.2.6 above. Further to this analysis and discussion, as seen on the following diagram and the according to Macquarie Research, SA Banking sector report, 2015 the South African banking industry has seen an increase in cost to income ratios, with some banks working hard to contain costs such as SBSA, while others are focused on growing on revenue and not as aggressive in driving

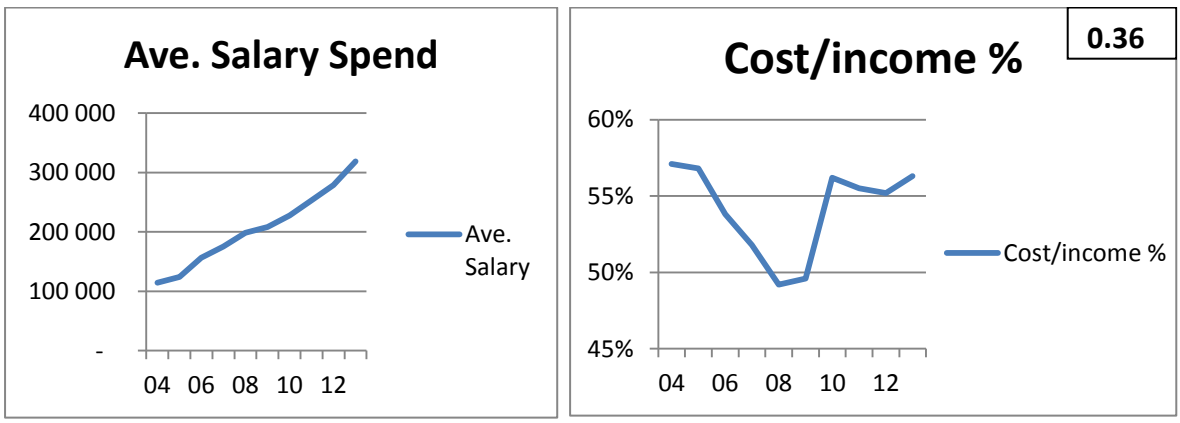
costs down. The following diagram provides an overview of average salary spend and cost to income ratio for the South African banking industry, and its correlation:

Figure 48: Banking Industry average salary spend and Cost to income ratio



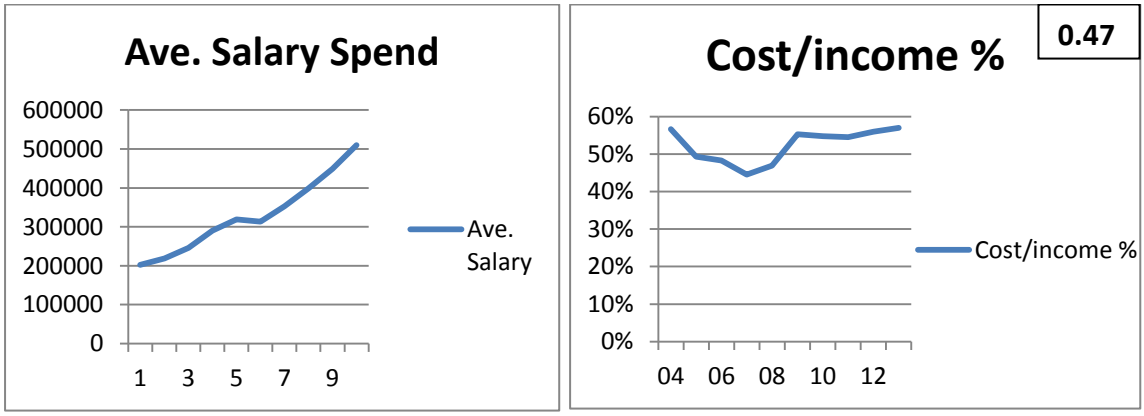
Different banks took different strategies that yielded different results, and according to Macquarie Research, SA Banking sector report, 2015, some focused on aggressive revenue growth to enhance profitability and improve cost to income ratios, and others focused on containing costs. The following diagrams present an overview of the banks' average salary spend and cost to income ratio, with their correlations.

Figure 49: ABSA's average salary spend and Cost to Income ratio



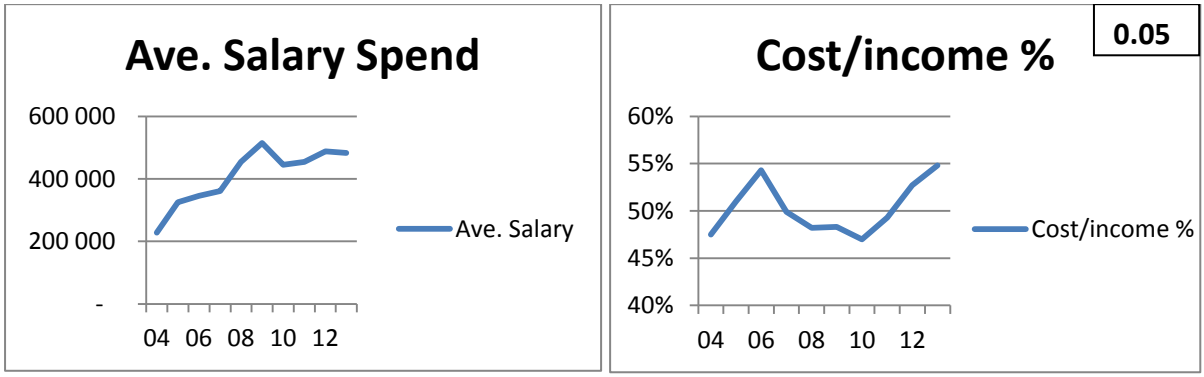
As mentioned earlier in 5.3.4, ABSA embarked on an expansion strategy that saw the company increasing staff complement and costs, while revenue was decreasing. Increasing costs at a rate higher than revenue would result in a higher cost to income ratio. The bank was found to have a weak positive correlation between average salary spend and cost to income ratio. This finding suggests that an increase in cost to income ratio in yea *n+1* is associated to an increase in average salary spend *n*. However, the association is weak.

Figure 50: SBSA's average salary spend and Cost to Income ratio



SBSA has been the best that displayed more resilience in constraining costs, while it also has the weakest revenue growth compared to other banks. A possibility of overinvestment in human capital in some of the banks that could potentially increase costs and hinder value creation should also be taken into consideration (Weiland and Flavel, 2015). The bank has been found to have a moderate positive correlation between average salary spend and cost to income ratio. This finding suggests that an increase in cost to income ratio in yea *n+1* is associated to an increase in average salary spend *n* for SBSA. The association is stronger than that of ABSA, but still moderate not strong. The bank according to Macquarie Research, SA Banking sector report, 2015 has presented the slowest income growth over the years.

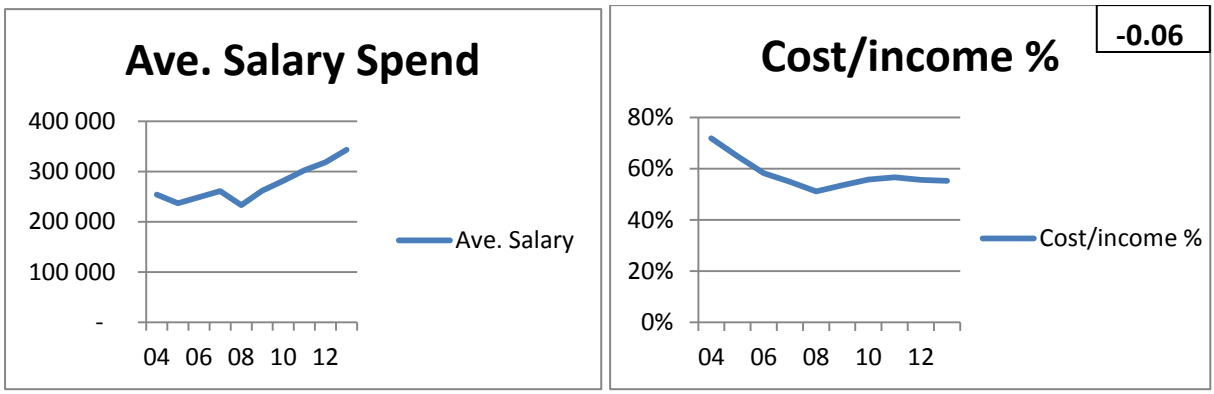
Figure 51: Investec's average salary spend and Cost to Income ratio



Investec has also increased its average salary spend considerable over the years, although revenue was not increasing at the same rate. This is evident from the sharp increase of cost to income ratio graph of Investec. As well as the possibility of management cutting human capital investment during times of tough financial performance, when management remuneration is linked to short-term profitability and returns for investors (Weiland and

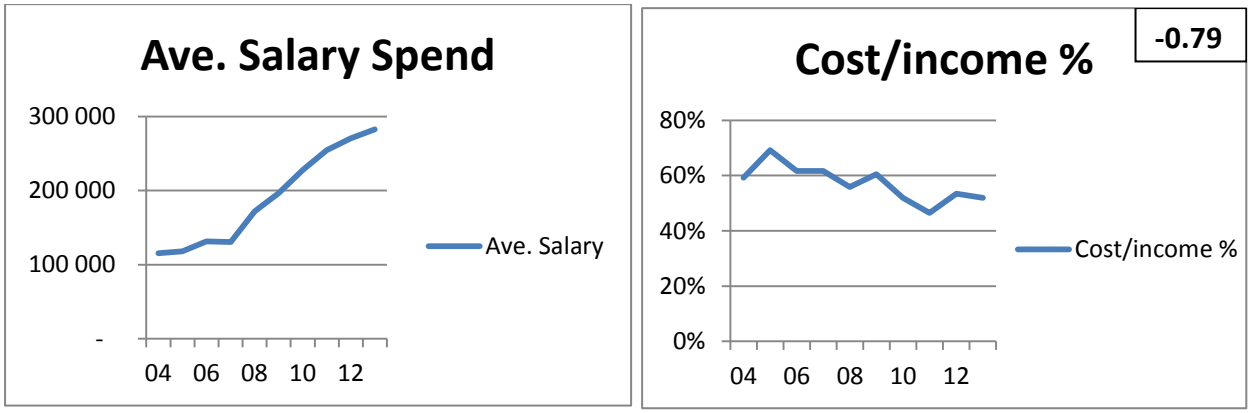
Flavel, 2015). The bank was found to have no correlation between average salary spend and cost to income ratio. This finding suggests that there is no association between the variables for Investec bank.

Figure 52: Nedbank's average salary spend and Cost to Income ratio



Nedbank as the second performer in revenue growth, after FirstRand, has managed to maintain costs almost on the same level. The bank has also been found to have no correlation between average salary spend and cost to income ratio for Nedbank.

Figure 53: FirstRand's average salary spend and Cost to Income ratio



FirstRand is the only bank that reduced its cost to income ratio since 2009, because of its aggressive strategy to grow market share, and therefore revenue, rather than cost containment (Macquarie Research, SA Banking sector report, 2015). Thank bank has been found to have strong negative correlation between average salary spend and cost to income ratio. This finding suggests that the decrease in cost to income ratio in year *n*+1 is associated with an increase in average salary spend in year *n* for the bank. FirstRand leads on income growth while ABSA leads on cost growth; as a result, very different trends are found in cost to income. FirstRand's reduction of cost to income ratio has been income

growth-driven, because its costs have increased in line with the average (Macquarie Research, SA Banking sector report, 2015).

5.3.7 Summary of deliberations pertaining to Research Question 2

The results of the study, continuing from the summary of research question 1 in 5.2.7 above, reflects that similarly with training and development spend per capita, the correlation of average salary spend with financial performance is subject to the indicator that has been selected to represent performance. Strong positive correlations were also found between average salary spend with revenue, net interest and net profit. Furthermore, it was also found that the correlations between training and development spend per capita and these indicators are reciprocal, suggesting that not only an increase in these indicators in year *n+1* is associated with an increase in average salary spend in year *n*, but an increase average salary spend in year *n+1* is also associated with an increase in revenue, net interest and net profit in year *n*. This finding also supports the slack resource theory that suggests that a company that indicates high financial performance has more resources available to invest in staff related activities (Weiland and Flavel, 2015). Strong negative correlations were found between training and development spend per capita and ROA. This is potentially due to the fact that training and development spend is also viewed as an expense that if over-invested in can hinder value creation. This view suggests that training and development spend per capita reduces earning for investors. This supports the trade off and traditional human capital theories that suggest that human resources activities and financial performance are negatively correlated (Weiland and Flavel, 2015). The authors suggest that human capital investment activities such as training and development spend and compensation increase costs and hinder value creation of a company (Weiland and Flavel, 2015).

5.4 Conclusion

The purpose of this chapter was to analyze and discuss the results of this study as presented in chapter 4 of this report. Similarities or consistency with Weiland and Flavel's (2015) investigation of the "relationship between orientation, financial performance and leverage" (Weiland and Flavel, 2015), and Aburgre and Adebola's (2015) study of "training

and development of middle managers in emerging economies: *Evidence from financial institutions in Ghana"* (Aburgre and Adebola, 2015) were found.

It was found that the relationship between human capital investment, as described in chapter 1 and 2 of this report, with financial performance is subject to the indicator that has been selected to represent performance. The relationship between HCI and revenue, net interest and net profit has been found to be strong and positive. This finding supports Aburgre and Adebola's (2015) suggestion that that training and development has a significant relationship with employees' performance, and consequently the performance of banks. Furthermore, more, this study also found that the relationship between HCI and these indicators is reciprocal. Aburgre and Adebola (2015) did not test for reciprocal relationship. The reciprocal relationship supports the slack resource theory as explained in 5.2.7.

It was also found through this study that HCI has a strong and negative relationship with ROA and ROA. This finding suggests that HCI reduces earning for investors. It also supports the suggestion by Weiland and Flavel (2015) that HCI is also viewed as an expense that if over-invested in can hinder value creation. This supports the trade off and traditional human capital theories that suggest that human resources activities and financial performance are negatively correlated (Weiland and Flavel, 2015).

CHAPTER 6: CONCLUSIONS AND RECOMMENDATIONS

6.1 Introduction

The purpose of this chapter is to summarise the findings of this study and compare them to the objectives of the study as discussed in chapter 1. The summary of findings will also form basis for the recommendations on human capital investment and financial performance for managers of banks in South Africa. Suggestions for future research, which can contribute to the body of knowledge, are also discussed later in the chapter.

6.2 Conclusions of study

The aim of this study was to assess the relationship between human capital investment and company's financial performance in the South African Banking industry. Weiland and Flavel's (2015) study suggests that there is a reciprocal relationship between employee orientation and financial performance in a company. Substantial research has been conducted in the study of human capital investment from different perspective, such as an economic study of human capital's impact on economic factors such as unemployment and economic growth. Some studies focused on HCI from an individual (employee) and the firm's perspectives.

This study was done from the firm's perspective to understand the relationship between investment on human capital and that human capital's knowledge, skills and abilities to the firm's performance. Wyatt and Frick (2010), state that human capital investment play a key role in the companies' and industries' outputs, given a set of inputs (productivity). They also argue that "evidence suggests human capital investment decisions are intrinsically linked to the success of a business and ultimately to the probability of survival" (Wyatt and Frick 2010, p199). The significance of the study was to provide management with much needed information use in the decision making process of HCI, considering the impact of over and under-investment in HCI. It will also provide analysts and investors enhanced ability to make better judgment on management's ability to make decisions for future growth, as well as guidance on the impact that a higher or lower HCI could have on the company's forecast of future growth (inflows).

6.2.1 Research Question 1

The first Research Question was to evaluate and analyze the relationship between the cost of training and development to company's financial performance. The results of this study have found that the relationship between the cost of training and development is subjective to the indicators that have been selected to show financial performance. The relationship of training and development cost with revenue, net interest and net profit has been found to be strong, positive and reciprocal. While the relationship of training and development cost with ROA and ROE was found to be strong and negative. The results have been found to be consistent with available literature as discussed in chapter 2 of this report. Training and development spend per capita was found not to have a relationship with cost to income ratio of a bank.

6.2.2 Research Question 2

The second Research Question was to evaluate and analyze the relationship between the average salary cost and company's financial performance. Similarly to 6.2.1, the results of this study have found that the relationship between average salary spend is also subjective to the indicators that have been selected to show financial performance. The relationships of average salary spend with revenue, net interest and net profit has been found to be strong, positive and reciprocal. While the average salary spend with ROA and ROE was found to be strong and negative. The results have been found to be consistent with available literature as discussed in chapter 2 of this report. Average salary was found not to have a relationship with cost to income ratio of a bank.

6.3 Recommendations

The intention of this study, as discussed in chapter 1, was to assist management to make better decisions related to HCI. Flamholtz, Bullen, and Hua (2002), suggests that if accounting for human capital can reveal that enhancement of human capital increases profits, management will include human capital consequences in their decision making process more. This could also provide analysts and investors enhanced ability to make a better judgment on the ability of management to make decisions for future growth.

The following recommendations are made to the management of banks:

1. Consideration of objectives of the organization and link HCI to specific financial performance indicators that are aligned to the achievement of strategic goals.
2. Caution against over and under-investment in human capital, because it has the potential to hinder value creation and earnings for investors.

6.4 Suggestion for future research

To continue to contribute to the developing base of literature on the Human Capital Investment, suggestions for further research are provided.

A study of the relationship between financial performance of the banks and HCI on different levels of employees should be conducted. This research will assist to analyze the development of specific levels of employees' relationship with financial performance. This study could also look at HCI with non-financial performance.

Challenges in the disclosure of non-financial information, as well as inconsistencies in reporting by the banks were experienced. This presents another potential study that could be conducted on the benefits and disadvantages of reporting on non-financial information, specifically HCI related information, in the South African banking industry.

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