



Scoping Study: Skills Gap in the Banking Sector in South Africa.

Desktop research approach

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Introduction

The evolution of nature of work has led to a change in the skills set required by different institutions. The change in the required skills sets coupled with stagnancy or lag in the change of the academic and skills development programs to meet the industrial requirements has led to a skills gap (Ditse, 2020). Alshare, (2018) states that skills gap can either be the unavailability of a particular skill that is required in the job environment or the skills that are provided by training sectors not matching what is being practically done at work. Those that have adapted to skills gap implemented in-training and upskilling of the existing staff to meet the evolution of the job requirements (Pillay, 2010). Of late, the changes in the job environment have been exacerbated by two main factors which are, changes in regulation and the development and adoption of technology. Work environment evolution was further accelerated by the 2007/09 global financial crisis and the recent Covid-19 pandemic to suit the new work environment (Belitski et al., 2021).

Studies in the banking sector that investigated the skills gap, have emphasised that the growth of the fintech environment has highly influenced the way in which people conduct business. Camarate and Brinckmann, (2017) states that the evolution of the banking sector and the change in the skills set requirements can be analysed by firstly dividing the banks work environment into three main sections which are the front office, middle office and the back office. According to Awe et al., (2010) there is an ongoing transformation of these sections of banks, but the rate of transformation has not been equal. In India 70% of the front office has been displaced by artificial intelligence whilst the middle and the back office remained stagnant in a paper-based system.

The future of work in the banking sector is in the trajectory of an increase in the demand of cyber security specialists, credit analysts, robot programmer, blockchain architect and process modeler experts (Pierce, 2017). Therefore, it is important to analyse the change in the banking sector and the skills gap that have been developed due to the changes in the sector. The objective of this study is to explore and analyse the trend in the employment opportunity in banks and to further investigate whether these skills are provided to meet this demand.

To start with, a review of demand side of the labour market indicates that the finance sector has most of the job opportunities in South Africa; however a significant proportion are re-advertised (47.73% of all re-advertised job opportunities are in this sector; followed by manufacturing at

28.57%). Within the finance sector 13.85% of the job opportunities are re-advertised after manufacturing sectors 17.77%

Table 1: Labour Demand in South Africa

SIC Description	Re-advertisements		
	No	Yes	Total
Agriculture, hunting, forestry and fishing	570	43	613
	92.99	7.01	100.00
	1.20	0.69	1.14
Community social and personal services	8672	142	8814
	98.39	1.61	100.00
	18.25	2.29	16.40
Construction	1061	145	1206
	87.98	12.02	100.00
	2.23	2.33	2.24
Electricity, gas and water supply	538	24	562
	95.73	4.27	100.00
	1.13	0.39	1.05
Financial intermediation, insurance real estate and business services	18326	2947	21273
	86.15	13.85	100.00
	38.57	47.43	39.59
Manufacturing	8212	1775	9987
	82.23	17.77	100.00
	17.28	28.57	18.59
Mining and quarrying	861	70	931
	92.48	7.52	100.00
	1.81	1.13	1.73
Private Household	109	3	112
	97.32	2.68	100.00
	0.23	0.05	0.21
Transport, storage and communication	2305	258	2563
	89.93	10.07	100.00
	4.85	4.15	4.77
Wholesale and retail trade; repair of motor vehicles, motor cycles and personal and household goods, hotels and restaurants	6864	806	7670
	89.49	10.51	100.00
	14.45	12.97	14.27
Total	47518	6213	53731
	88.44	11.56	100.00
	100.00	100.00	100.00
Pearson Chi2 = 1418.77 Prob = 0.0000			

First row has *frequencies*; second row has *row percentages* and third row has *column percentages*

Source: Own computation using Department of Employment and Labour Demand side statistical database

There is no doubt that the banking sector is finding it difficult to fill vacant positions; which although it can be attributable to many factors like asymmetric information and general lack of relevant skills to meet the criteria is of great concern. A trend on the nature of job descriptions demonstrates that shift in skills set which is widening the gap.

Overview of the evolution of the South African Banking sector

The South African banking system has gone through several stages of evolution in terms of the rate and the general adoption of technological and the general overview of the sector as shown in Table 2 below. There has been many developments in terms of introduction of new products, laws and regulations, which led to an increase in the demand of many new skills sets (Pierce, 2017).

According to Camarate & Brinckmann, (2017) during the period of 2004 to 2014 Absa, Nedbank and Discovery launched different digital products and this derived an integration between the banking sector and the IT industry. Camarate and Brinckmann, (2017) forecasted the increase in demand for tech employees and future skills gap in the banking sector at the time due to the low supply and training of tech specialists to meet the growth derived by integration between tech sector and the banking sector. Whilst, during the period 2015 to 2022 as identified in Table 2 below, there has been a large number of activities and the launching of products that increase financial inclusion and this also derived the demand of labour that is in the financial sector to serve this increase in inclusion and to manage the digitalisation (Camarate & Brinckmann, 2017; Ditse, 2020).

Table 2: Overview of the Evolution of the South African Banking system

Period	Bank	Development
2004-2014	Discovery	Discovery enters the credit card market with discovery card
	Bidvest	Bidvest launches Bidvest bank
	Teba Bank	Changes to Ubank
	Absa	Launches digital bank strategy
	Nedbank	Launches a managed evolution IT strategy
	Mercantile bank	Launches Mercantile private bank
	African Bank	Gets approval to set up a new good bank
	2015-2022	Old mutual
African Bank		Expanded into offering transactional and insurance products
FNB		FNB launches the first mobile banking unit in SA to improve financial inclusion
SARB		Grants provisional banking licence to Discovery, Tyme and Post bank
Ubank		Launches own digital payment platform with WIZZIT international
Standard bank		Acquires majority stake in Snapscan
Fusion of banks		Formation of Human settlement development bank
FNB		Launches FNB fusion for premier and private wealth clients
Capitec		Launches its credit card
New banks	Launch of Discovery, Tyme and Post bank	

Overview of the financial sector reforms and new skills set requirements

Ditse, (2020) states that changes in regulations in the banking sector can lead to a gap in the skills sets required in the banking sector. South Africa went through several financial sector reforms since the dawn of democracy. The deregulation of entry requirements in the financial sector, changed the mix of the players in the financial sector (Muyambiri, 2017). The deregulation also included changes in the way in which things are done in the financial sector and gradual improvement in financial inclusion, which required training of the existing employees to meet the new skills requirements (Muyambiri, 2017). Awe et al., (2010) states that deregulation in the financial sector increases the level of competition and this leads to increase in demand for innovation , marketing, reseach and business development specialists.

Since 1994 there has been an increase in the number of foreign institutions in the South African insurance, banking and brokerage economy which has led to an increase in the demand of the existing skilled individuals whilst the supply was stagnant and this created a skills gap in the market.

Materials and Methods

Following the changes in the way in which banks do business due to digitalization of the banking sector and the changes in the regulations in the banking sector, a desktop research was undertaken to analyze the emerging skills required in the banking sector looking at the adverts and banking sector reports on South Africa. The research surveyed LinkedIn, Indeed, Bizcommunity, and Careers24. The study restricted the search to “Jobs in the banking sector” “banking sector skills” and “financial sector skills”. The research was conducted from the 8th of March to the 15th of March 2022.

Results

The results of the study are presented in Table 3, 4 and 5 below, which shows the different types of jobs that have been advertised and the skills required by the different institutions to execute and fulfil the job requirements. As per changes denoted in literature, skills assessment has been

subdivided into two main segments: based on the underlying digitalization and regulatory copying adjustment of the banking sector.

Hard and soft skills required in the banking sector.

According to Ditse, (2020) the causes of the skill gap in the banking sector can be classified under, societal issues, such as poverty, inequality and poor access to education. Ditse, (2020) identified that the second set of factors can be classified under academia such as the misalignment of the curriculum, lack of practical experience, lack of soft skills and misaligned expectation; whilst there are other industrial issues which include competition for talent, organization inertia, skills mismatch and less productivity and competitiveness. Table 3 below also shows that there are several soft skills that academic and training institutions do not offer, but they are significantly important in the banking sector. It is also important that there should be a mechanism in which these skills can be instilled into individuals. Chowdhury, (2020) states that a closer integration between industry, academia and interdisciplinary training can be able to close the skill gap.

Table 3: Hard versus soft skills set.

Hard skills	Soft skills
Data scientist	Social and emotional skills
Analytical skills	Communication skills
Coding	Design thinking
Programing	Co-ordination and time management
Artificial intelligence	Collaboration and time management
Digital skills	Systematic thinking
System engineers	Critical thinking
Computer scientist	Agility
Actual science	Complex thinking
Robotics	Creative
Applied mathematics	Curiosity
Project management	Diligence
Statistics	Leadership skills

Source Ditse, (2020).

Skills gap in the banking sector derived from regulatory adjustment and labor competition

The study identified that the transitions in the banking sector can be driven by changes in the regulations in the market, making the previous skills, procedures and products redundant and creating skills gap between what was trained vs what is applicable to the current environment. Different regulatory changes that occurred in the banking sector, led to a requirement for the employees to constantly adjust skills. Secondly it is important to note that the skills gap results shown in Table 4 below reveal some missing links between the qualifications and the responsibilities of the employee on the job. This is one major reason why tracer studies should be conducted to see how relevant the skills and concepts studied are to the job one is occupying, and what one wishes to have acquired from school.

Lack of specialisation in academia leads to employees requiring anyone that has an idea of commerce, and they will do a skill upgrade to suit their requirements (Pierce, 2017). However, the broadness of the university training is important due to the diversity of skills required by these roles as noted in the job descriptions in Table 4 below. There is a high volume of banks that require individuals that are highly skilled in risk and portfolio management as identified in the roles and responsibilities in the jobs in Table 4 below. The results also show that there is an increase in the level of competition for financial analysts and investment banking analysts in the banking sector, due to the number of adverts and the number of banks that are requiring this skill.

Table 4: Banks adjustments to digitalization

JOB	JOB DESCRIPTION	SOFT SKILLS	QUALIFICATIONS REQUIRED
Investment Banking Analyst & Financial analyst	<ul style="list-style-type: none"> Work with senior Corporate & Investment Bank (CIB) officers and professionals and participate client transactions, projects or assignments as the junior member of the Investment Banking team. Responsible for organizing and analyzing sophisticated financial data used in client proposals and strategic plans. Prepare written recommendations, valuation materials and statistical exhibits for pitches and live deals. Conduct economic/financial research 	<ul style="list-style-type: none"> Good written and oral communication Ability to work in a team, but also independently Attention to detail A “can-do” attitude Multi-tasking 	<ul style="list-style-type: none"> Bachelor's degree in Finance or closely related areas of Business Administration Financial Analyst- (banking/management consultancy industry)-AA/EE position
Foreign exchange consultant	To ensure foreign payments are made efficiently and in accordance with South African Reserve Bank’s regulations.	<ul style="list-style-type: none"> Attention to detail. Problem Solving and critical thinking. Analytical ability. Client service orientated. Strong communication skills, both written and verbal. Planning and organising. Be a team player as well as able to work independently. 	<ul style="list-style-type: none"> Minimum Qualification - Grade 12 Experience - 1 – 2 years banking experience. Exchange Control experience is advantageous
Sharia Private banker	To grow, retain and execute on the private segment offering, related initiatives and activities aimed at creating value for the client and the bank (i.e. optimizing client experience, building deep relationships and create profitability for the bank).	<ul style="list-style-type: none"> Deliver exceptional and high-quality service that exceeds customers’ expectations through proactive, innovative and appropriate solutions 	<ul style="list-style-type: none"> Business Commerce Degree
Private banking analyst private wealth	To assist in proactively managing a portfolio of FNB Private Wealth Clients with a team of Private Bankers through provision of analysis, research and sales and service fulfilment with the intent of identifying additional opportunities for banking new clients and growing a portfolio of existing clients through effective stakeholder management.	<ul style="list-style-type: none"> Adapting and Responding to Change Learning and Researching Persuading and Influencing Presenting and Communicating Information Relating and Networking Working with People 	<ul style="list-style-type: none"> Relevant Degree in Finance or Economics or Accounting. Preferred Qualification: FAIS accreditation required (RE). 2 - 3 years’ experience within a Sales/Service area of a financial environment.
Internal banker	<ul style="list-style-type: none"> The role is responsible for holistically managing requests including client onboarding, KYC and account opening for transactional banking and specialized products and services, portfolio management and escalations. The role ensures that the requests are attended to within the agreed SLA. 		<ul style="list-style-type: none"> Diploma in Customer Care Management/ Client Service Preferred Qualification (additional to minimum)

Banking Property consultant	<ul style="list-style-type: none"> • Take control of high value property transactions and drive these through all stages of the Banks approval process. • Facilitate repeat business through fast and efficient client service • Help the region and the division in achieving annual fee and advances targets by driving daily tasks to completion. 	<ul style="list-style-type: none"> • Good interpersonal and communication skills • Proficient written English • High level of computer literacy especially in Microsoft Excel and Word • Well organised with proven administrative track record • Pro-active, self-starter and self-managed • Detail orientated. 	<ul style="list-style-type: none"> • BSc Property Studies (HONS); or B Comm/Financial; or Legal Qualification • Minimum 3 years' experience in the property market / banking / financial services industry
Transactional analyst	<ul style="list-style-type: none"> • The day to day administration of all Exchange Control reporting and vetting functions ensuring full compliance with Exchange Control. • Accurate and timely reporting of all relevant items on the BOP and IVS (import Verification System). • Weekly reconciliation of all BOP transaction via the Balancing module. • Administration and co-ordination of quarterly Balance of Payments inspections. • Daily OFAC sanction screening on all Exchange control related documentation prior to payments being released. • Section K reporting: Monitoring that all Nonresident accounts and CFC are not overdrawn. • Providing key metrics and updates required for monthly control and business forums. 	<ul style="list-style-type: none"> • Organised • Strong written & verbal skills • Analytical • Problem solving 	<ul style="list-style-type: none"> • BCom or relevant Financial qualification preferable • A thorough understanding of, and interest in, the South African Exchange Control regulations and rulings.
Quantitative analyst	<ul style="list-style-type: none"> • Analysis of credit risk and policy recommendations based on data analysis/ statistical methods. • Build and formally present reports by monitoring business performance within the set risk appetite and through analysis. • Report to; monitor; and advise operational areas to manage trends through analysis for ad-hoc requirements. • Increase efficiencies through programming and automating processes. 	<ul style="list-style-type: none"> • Critical thinkers who conceptualize and structure problems, perform numerical analysis and extract key insights that underpin our recommendations and solutions for our clients. • As an analyst you will be working alongside industry experts and gain invaluable on-the-job experience. • You'll also have exceptional interpersonal and communication skills that make you the ideal team player. • The nature of the role means that analysts travel frequently, so you'll need to be ready to jet-set across the globe. 	<ul style="list-style-type: none"> • Matric/ Grade 12/ National Senior Certification. • Minimum of a Bachelor's Degree in a Quantitative field, Commerce, Maths, Stats, Actuarial Science, Engineering with relevant technical skillset.

Digitalisation and skills gap

The results of the study have found that the digitalization of the banking sector has accelerated the increase in the demand of IT jobs in the banking sector in South Africa as identified in Table 5 below. Skills gap in this section is caused by two main factors which are the shortage of the personnel that can do IT and the increase in the competition between banks of these employees. Furthermore, the broadness of the IT industry without specialization in the business environment or in the banking sector at the university level can also lead to a skill mismatch contextually.

The skills gap identified in Table 5 below is largely that banks in South Africa require IT, data analysts', programmers and software analyst, whilst Covid-19 pandemic accelerated the demand of these specialists across all sectors. The results presented reveal that the skills gap needs to be narrowed through business IT specialization to enhance these programmers understanding of the banking environment as suggested by Alsafadi and Abunafesa, (2012). Furthermore, it is important to note that there is need for universities to have inter disciplinary programs that enhance the performance of the specialists in the banking sector (Ditse, 2020).

Table 5: Banking Jobs from Digitalization

Job	Job description	Soft skills	Academic requirements
<p>Cloud/WAS Systems Engineer: Banking: FTC</p>	<ul style="list-style-type: none"> • Providing technical expertise in the WAS area for both private and public cloud on AWS and Azure. • Developing and deploying automation technologies including monitoring, configuration management and deployment solutions as they pertain to WAS. • Demonstrate a track record writing scripts and code to resolve issues and to increase levels of automation. • Experience with Automation tools such as Ansible or Chef. Experience with DevOps tools. • Perform and monitor day to day scheduled and ad hoc (as per task requests) activities on the associated IT infrastructure. Perform deployment work for projects on demand and in accordance with project schedules and supporting iteration plans. • Support Operational Controls processes (Audits, Risk and DR& BCM governance, business processes improvements, performance management, and finance and business management), supply requested information and implement corrective actions as applicable. • Research advancements in the technologies at hand to ensure appropriate application as well as knowledge in SBSA to exploit new functionality and features. 	<ul style="list-style-type: none"> • Mentor, guide, educate and coach team members. • Contributes to the development of talent management programs and succession plans. • Provide thought leadership to the Group IT community as to how to leverage technology investments to address business and IT related complexities. 	<ul style="list-style-type: none"> • Preferred: Master’s in computer science or related • AWS Certified Solutions Architect • IBM MQ, IBM Certified System Administrator: MQ V9.0
<p>Senior Specialist: Cyber Threat Intelligence & Hunting</p>	<ul style="list-style-type: none"> • The Senior Specialist: Cyber Threat Intelligence and Hunting will be responsible for the detection and isolation of advanced threats capable of evading existing security solutions for tier one, two and three OpCos. • The incumbent will be responsible for threat landscape assessment and monitoring; brand abuse, information leakage, fake apps, phishing sites and other scam detection and take down, as well as general and telecommunications malware analysis and IOC generation 	<ul style="list-style-type: none"> • Fluent in English • Multi-country operations oversight experience • Willing and flexible to travel within Africa and Middle East • Understanding of general regulatory requirements in the telecom industry as it relates to Cyber Threat Intelligence • Global mindset to service worldwide operations • Telecommunications industry experience would be beneficial • Pan Africa and Middle East multi-cultural experience would be beneficial. 	<ul style="list-style-type: none"> • Three-year tertiary qualification in Computer Engineering or similar • Certified Threat Intelligence Analyst (CTIA) • Offensive Security Certified Professional (OSCP) • Certified Ethical Hacker (CEH) • Open-Source Intelligence (OSINT) Gathering and Analysis

Senior Payments Systems Designer	The purpose of the Systems Designer III is to support IT and Business by producing the technical design and specification of software solutions within the Banking and Payments functional area in the company.	<ul style="list-style-type: none"> Identify and understand detailed user requirements. Ensure that the required solution is delivered to specifications. Communicate effectively and timeously on function deliverables. Continuously support the business environment. 	<ul style="list-style-type: none"> National Diploma or Degree in IT or related field.
Financial Analyst	<ul style="list-style-type: none"> Analysis of systems i.e., CRM, Financial Reporting, asset Management. Manipulation and formatting of data in Excel, and using VBA to automate tasks. Build automated analytical reporting models utilizing macros. Identify financial impact on margin and profitability. Drive process improvements to support margins and profitability. Ad hoc tasks as required by the CEO. 	<ul style="list-style-type: none"> Passion for contributing to a culture of diversity, inclusion and belonging. Understanding of agile concepts. Solid communication skills. Great teammate. 	<ul style="list-style-type: none"> Degree in finance or related qualification
Data Engineer Pipeline		<ul style="list-style-type: none"> Engage in troubleshooting and root cause analysis toward identifying solutions and next steps for production issues. Own critical features and be able to work in a self-directed, autonomous manner. Be a hard worker who is willing to learn new skills. 	<ul style="list-style-type: none"> Honours Degree in Information Technology - Computer Science or Information Technology Systems Engineering: Knowledge and Experience
Software QA Analyst (JHB)	<ul style="list-style-type: none"> Be part of a team of skilled resources who design, develop, test, implement and maintain software solutions for customers in the telecommunication and banking industry. Familiarize and adhere to the various system environments (DEV, QA, UAT, PRE-PROD, PROD, etc.) pertaining to the individual customers, the tools 	<ul style="list-style-type: none"> Good verbal and written communication skills. Stress management skills. Time management skills. Target orientated. 	<ul style="list-style-type: none"> At least two (2) years' experience in a Quality Assurance role and dealing with Tier One (1) clients in the Telecommunication and Banking environments. Knowledge of software test suites.

	<p>and procedures relevant to the quality control processes including the project office procedures.</p>	<ul style="list-style-type: none"> • Decision-making skills. • Problem solving skills. • Attention to detail and a high level of accuracy. • Focused. • Dedicated. • High level of personal integrity and ethics. 	
BI Analyst	<ul style="list-style-type: none"> • BI Analyst – Basically a Data Analyst for Credit Area business Banking Credit <ul style="list-style-type: none"> • Based Stellenbosch or Sandton • Hybrid – 3 days weekly • 2 Vacancies Retail -Stellenbosch • 1 Business Bank - Sandton 		

Key take-aways

- Changes in the regulatory environment in which the banking sector has been operating over the years influence skills gap.
- There is a need to internally up-skill the workers to close the skill gap between the previous skills acquired.
- Evolution in the banking job environment has been recorded over the past two decades.
- The job market does not solemnly depend on the hard skills that are trained in universities, but a combination of both hard and soft skills.
- The soft skills gap exists in diligence, complex thinking, curiosity and leadership skills.
- There is a gap in soft skills mainly because the university curriculum largely focuses on the training of hard skills and a theoretical training of the soft skills.
- There is need for mechanisms to train soft skills in conjunction with hard skills to improve the quality of graduates and retention of post internships.
- The digitalization of the banking sector has led to skills gap in the market that is derived shortage of the people that are qualified for these skills, competition across markets and within the banking sector for these skills and the low supply by universities of the people that have these skills.
- There is a skills gap of the individuals that have the capabilities to do risk analysis, financial analysis and research as identified by the job descriptions that there is great need for the research skill in the banking sector.
- There is need for the academic sector to have an integration between the computer science industry and the business sciences in order to ensure that there is improvement in terms of contextual gap of the workplace.
- There are other skills gap causing factors which are social, and these include issues surrounding poor access to education and access to technology in schools which can be solved by increasing access to these resources.

Recommendations

Firstly, the study recommends that there should be integration between the banking sector and the academic or training sectors to assist in the provisions of soft skills which come through practical

and feel of the work environment. Awe et al., (2010) recommends that there is need to change from theoretical learning to experimental and practical learning that stimulate real life and practical skills and will help with soft skills. Awe et al., (2010) states that this can be done through the designing of the curriculum to include internship, practical's and work attachments.

Secondly the study recommends that there is need for the constant intentional training of the personnel that are already in the banking sector to upskill and to maintain their relevance in the positions due to changes in the work environment. The study recommends that there is need for upskilling in terms of digital skill, legal framework and soft skills on a yearly or biannual basis.

Thirdly there is also need for a bidirectional collaboration between banking sector and academia in updating and upgrading of the existing staff in both the banking sector and academia. It is important for the people in the banking field to enhance the improvement of the curriculum alignment to the changes in the banking market such as digitalization, new products and service delivery methods

Fourth, there is need for the universities to increase their enrolment of students for IT since it is limited by the enrolment requirements such as the Math's requirements which eliminates a number of students. Furthermore, it is important to find a way to integrate finance and IT to solve this issue to hard skills in IT and the banking sector.

Lastly, the study also found that there is need to reduce the level of brain drain to train to close the skills gap which is mainly caused by poor economic prospect. The study recommends the industry and other stakeholders involved to find ways to make sure that their employees are comfortable, and they do not lose the skilled labor that they have, and they can be able to retain it.

Limitations of the study

The study focused on desktop research and there is need to analyse the impact of social factors and the level of competition in the banking sector and to undertake qualitative research in the sector. The study identified that there is a skills gap of soft skills and there is need for research to analyse the existing measures and training forms for these soft skills by the universities and other training institutions. Furthermore, there is need to track these adverts over a long period of time and analyse how long they will be reposted.

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