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List of abbreviations

3D	Three Dimensional
4IR	Fourth Industrial Revolution
ATM	Automated Teller Machine
GCSI	Government Communication and Information System
ICT	Information and Communications Technology
NDP	National Development Plan
SABC	South African Broadcasting Corporation
Stats SA	Statistics South Africa
WEF	World Economic Forum

Executive Summary

In the past years we saw how information technology has evolved and how it has impacted our lives. It improved the way in which we do things, including how we carry out our tasks at work place. Through technology, employment in other industries was affected since robots were being introduced to replace humans in doing day to day work.

When compared with other industrial revolutions, a fourth industrial revolution has totally changed how people work, communicate with one another, how markets operate and how businesses operate. The Fourth industrial revolution evolves from digital revolution and as well as the growing utilization of new technologies such as artificial intelligence, cloud computing, robotics, 3D printing, the Internet and, advanced wireless technologies. Every single industry in every country around the world has been affected.

Given the high unemployment rate and the poor education system in comparison to the continuous rapid growth of disruptive information technology, South Africa will have a problem keeping its citizens relevant and employable during this fourth industrial revolution. The rate of unemployment continues to grow in South Africa as companies continue to retrench employees due to new technologies. This means the working environment has changed and does not require certain skills of its employees as technology performs the same tasks efficiently and effectively. Like tellers in the banking sector are becoming less irrelevant as most of the banking services are performed on ATM, cell phone and internet banking.

Unfortunately, even graduates are not exempt from the high levels of unemployment. This essay therefore aims to explore the impact of the observation made by the World Economic Forum with regards to how existing jobs will be affected by the Fourth Industrial Revolution (4IR). It explores how can the South African can retain jobs for those already employed as well as how more jobs can be created despite the prevalent high unemployment rate and the lacklustre education system.

1.1 Introduction

The Geneva conference, which South Africa is part of, highlighted the potential impact that technology is going to have on the current workplace. It identified the sectors where jobs are going to be lost, it further identified the skills that will be required in the near future.

We look at the role SA government can undertake to curb job losses, whilst already suffering from a weak economy that has contributed to a high Employment rate and a view of self-inflicted poor education system. How will it fair and what can Government do, this time with the backdrop of a Fourth Industrial Revolution?

Unemployment rate was recorded at 29.1 % from the fourth quarter of 2019 (Stats SA, 2010). This is extremely very high rate for SA as an emerging market and as a leading economy in Africa. High unemployment rate is normally associated with high levels of poverty and inequalities. All sectors of the economy are adversely affected by this high levels of unemployment which indicates an economic contraction. The skilled workers and unskilled workers are all affected the same way, both urban and rural areas alike. Crime is also sky rocketing as a result thereof.

There are fears that with the Fourth Industrial Revolution jobs will be lost, but this is far from the truth. South African decision-makers across sectors need to take bold steps to ensure that there is sufficient re-skilling to help reabsorb workers into the workforce (Magwentshu, Rajagopaul, Chui and Alok, 2019). South Africa would have to develop new policies and strategies to address 4IR. This will impact in public, private, labour and education sectors. As of October 2019 the unemployment rate in South Africa was 29.1% (SA, 2019). This translates to 6.7 million South African's looking for employment. The bulk of these unemployed citizens have education levels which are below matric.

It is not true that technology will replace humans, but it will increase productivity and reduce costs. There are those professions that can never be replaced by robots, especially those requiring the emotional or social aspect of human interaction, for instance psychiatrists. A lot of jobs with the 4IR will become redundant with the move from labour intensive to skills intensive production. The effect of retrenchments in the banking sector in South Africa is an example of the 4IR impact with the closure of many branches. Employees will have to undergo retraining of skills because of automation in manufacturing, Augmented Intelligence, Information and communication technology (ICT) and advanced robotics. There is clear and

visible evidence of machines taking over in certain industries according to Kayembe (2019). An example of this is with Telemarketers who are already being replaced by automated sales calls, Cashiers at McDonalds being replaced by self-service tills, these employees do not have to lose their jobs but they can be retrained to maintain new technological developments depending on the educational qualification they currently possess.

1.2 Factors Contributing to the High Rate of Unemployment in South Africa

There are various reasons why there is such a high rate of unemployment in South Africa, The Department of Government Communication and Information Systems (GCIS) has indicated on their Insight Newsletter Issue 13 that some people have the believe that unemployment only started after democracy in 1994, whereas that is entirely not true as many people have been struggling to find employment before democracy.

The said newsletter has indicated that post democracy the unemployment rate in South Africa was at 20.5% and in 2014 the unemployment rate was at 25.2%. The newsletter goes on to outline that South Africa has experienced low levels of investment in the education system for Africans, including unfair job reservation due to nepotism which became a norm before democracy.

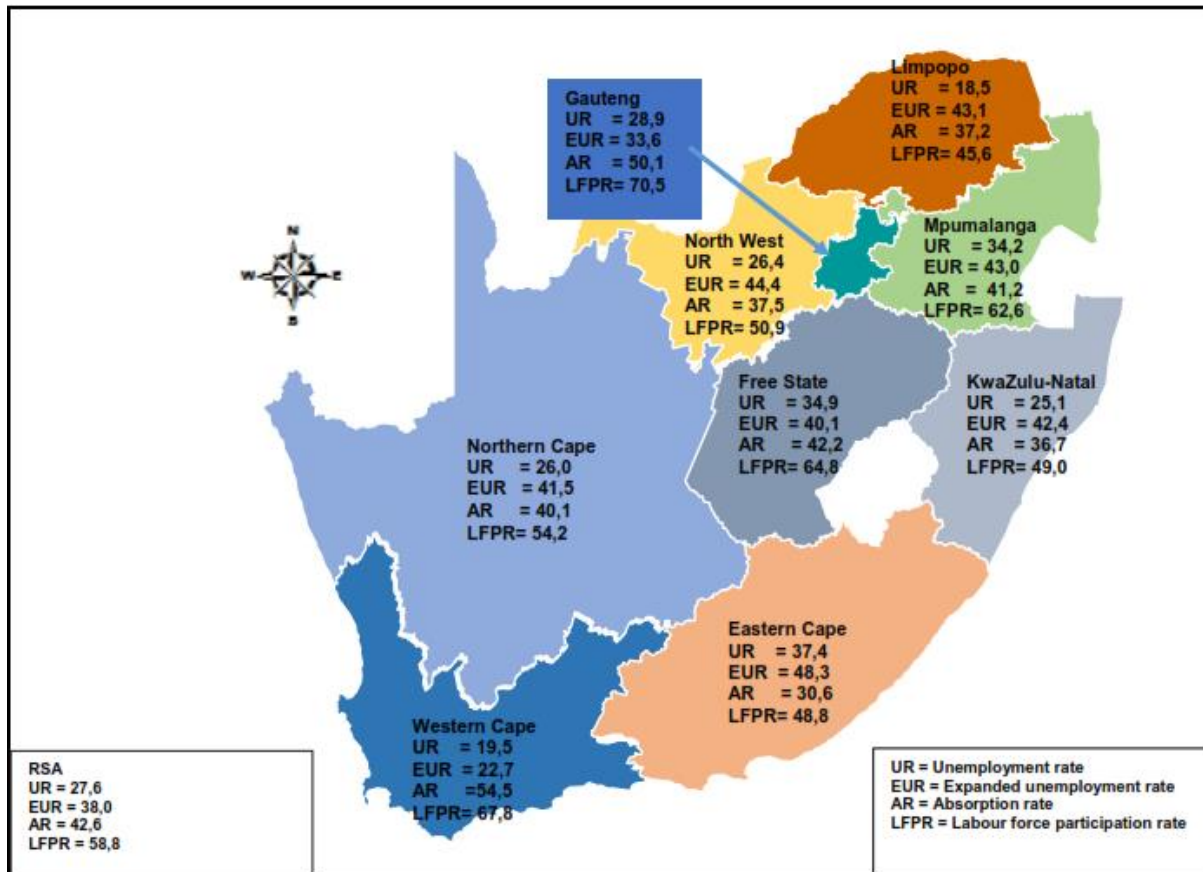


Figure 1 Unemployment rate per province (%), Q1: 2019

The information in Figure 1 above clearly gives the gloomy picture about unemployment in SA, it has been released by Starts SA 2019. Beall, Jo, Owen, Parnell and Susan (2000) have discussed one of the factors that are causing high unemployment rates is the fact that the population of South Africa is growing at a faster speed than the economy of the country, whereas the number of vacancies does not match the increase in population rate.

The GCIS Newsletter issue 13 has also outlined a few factors that contribute to the high unemployment rate:

- The global recession 2008: During this recession period many employees lost their jobs due to companies not being able to pay salaries to the number of employees they had, hence the workforce had to be reduced.
- Trade Unions in Government: The high wage demand leads to the decrease in new employment creation as companies cannot afford to increase wages and create more positions at the same time.

- Entrepreneurship: A lack of entrepreneurship in the South African youth has a factor in the high unemployment rate as many young people do not embrace entrepreneurship opportunities as compared to seeking employment.
- Slow growth on the economy: South Africa is experiencing a slow growth in the economy where less jobs are created to meet the demand of the South African population.
- The Poor Education System, the quality of education in South Africa contributes greatly to the unemployment rate in the country – matric students that have matriculated with exemptions are considered as functionally illiterate; meaning the grade 12 student who just matriculated does not possess adequate quality in mathematical, writing and communication skills, therefore they struggle with tertiary level education.

1.2.1 What Does the Term “Poor Education System” Mean?

Aksentijević and Ježić (2019:194) state that education has an extreme effect on the economy and the authors refer to education as “key factor in determining whether the country is developing, developed or under developed”. Therefore, it is safe to say that to build coherent economic value, investing in education should be the top priority of the government. Unfortunately, the South African Department of Education has been a centre of controversy in recent years from unsatisfactory infrastructure, to failing of books delivery and not to mention the violence in public schools which now seems to be the main characteristic of South African public schools (SABC Digital News, 2017).

Another concern, is the proliferation of school drop outs, or prolongation of courses (from three year course to taking six years) (Stats SA, 2019). This shows that the country has a long way in dealing with the issue of unemployment which emanates from poor education system. The research shows disturbing results, especially because we are now living in the digital age where fourth industrial revolution is trending. However, the question remains: will the country have enough skills to globally compete in the economic contexts, or will the country be just patron? As the end users need adequate skills to operate the systems, what will happen to unemployment rate?

1.2.2 Economically, is South Africa up to Par?

The SA economy has been volatile in the past decade; the growth rate has been way lower than the levels required to stimulate job creation in order to reduce high unemployment rate. Sound and clear economic policy should provide positive direction for both macro and micro-economics. It is actually the life blood of the economy. As a developing country, there is still plenty of room for improvement in order to ready the country for another industrial revolution. The critical part is the commitment, concentration and determination of the government in the implementation of the policy.

Governments' role is covered by enacting laws, and at times where private markets fail, an economic role for government may arise. Government does have inherent economic functions which are: to provide the legal and social framework (NDP 2 for SA has enacted this framework to cover this); to Maintain competition, and to provide goods and services to the public.

The inevitable threat that is presented at the Geneva conference, creates a challenge in how government is 'to prepare a safety net for workers for a shift in permanency and quality of new jobs'.

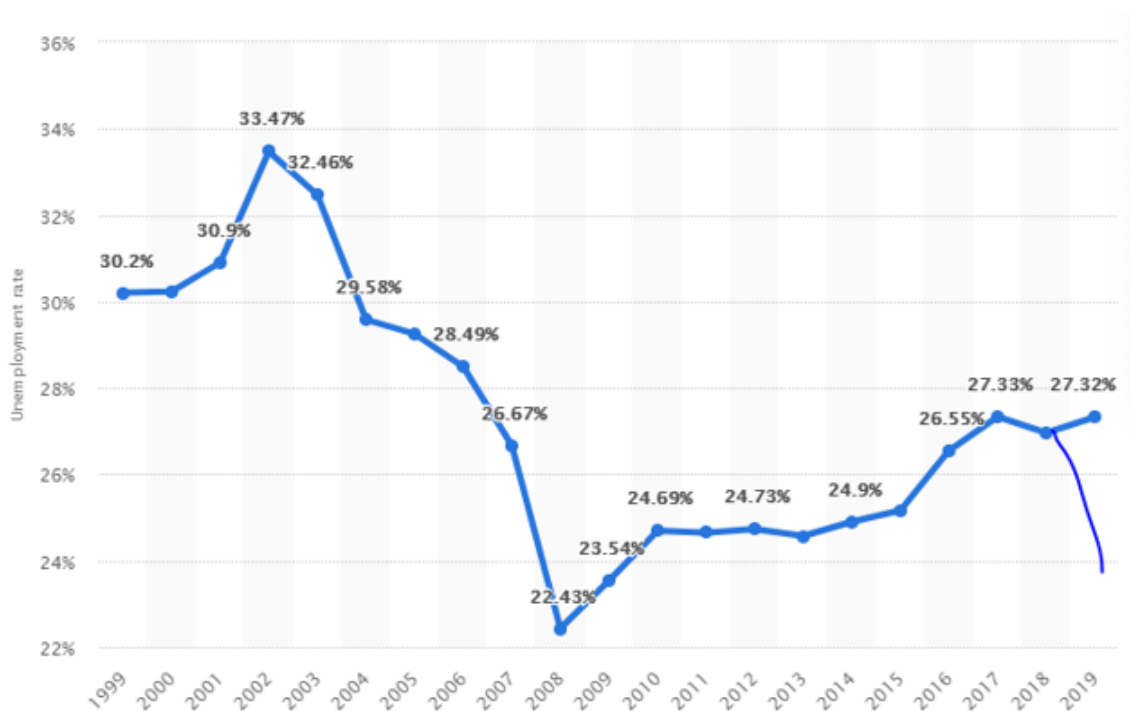


Figure 2 Unemployment rate 1999 – 2019

Since from 2008 SA economy has not been growing at the rate high enough to reduce unemployment to safe required levels. Figure 2 indicates chronic failure of SA government economic interventions.

Will there be a market failure? Will the South African Government be able to avoid job losses given the current employment rate and education system? How do we define them as a part of Government failure or Market failure? Market Failure is “a circumstance in which private markets to not bring about the allocation of resources that best satisfies society’s wants”. Will South Africa be able to provide adequate resources in order to best meet the demands of the 4IR?

1.2.3 Is South Africa Technologically Ready?

Technologically, South Africa is behind when it comes to the previous industrial revolution (Information technology). Most of the schools in South Africa do not have computers and internet. Most of ordinary citizen never used a computer in their lives and that makes most of the population computer illiterate. There has however been an increase in digital usage due to cell phone banking and accessibility of smart mobile phones.

Like other industrial revolution fourth industrial revolution does not come with problems only; however, on the other hand there are numerous number opportunities and roles that come with new technology. Based on the article by World Economic Forum (WEF) the estimated is that more new roles will be created compared to the job loss from the advancement of new technologies. The creation of 133 million jobs as opposed to the 75 million lost. As mentioned earlier, not all jobs will be displaced, just those that are repetitive and which can be automated. This however does create the opportunity to create more supervisory (middle-management) roles since the machines would have to be supervised. Senior management that require the human component of emotional intelligence and problem-solving in an emotional and psychological sense will created since the middle-management will diversify, expand and the quality thereof should increase due to up-skilling.

The Fourth Industrial Revolution might work for the country’s economy as we see companies like Capitec bank growing after its establishment during a digital area. The growth of financial service’s technology is linked to other industries like telecommunication. People need cellphone, data and internet to transact via cellphone banking. Maybe other industries with correct resources will follow suit in growing its operations and economy.

South Africa is Africa's most industrialized economy and creates a gateway to Africa. It's recommendations received from the conference are not merely a legislative function as accepted in the Geneva Conventions Act, 2012 (Act 8 of 2012), however the recommendations do shape the direction in which Government can be equipped, prepared and continue to attract foreign investment through a policy framework that bodes well for a developing country.

1.2.4 Corona Virus COVID-19 shock

The virus is already impacting the SA economy negatively due to the economic shut down caused by the pandemic. According to the SA Reserve Bank the pandemic could lead to over 370 000 job losses in South Africa. The pandemic completely caught many countries off-guard, the overall response has been very poor and thus deepening the impact.

1.3 Issues to be Addressed

Aksentijević and Ježić (2019:199) postulate concerns respecting the negative repercussions of poor education system in any given country. In context, robots are now performing tasks that ordinary South Africans with average education would do; like welding, painting cars and taking orders from customers. That shows the country will need highly skilled people, critical thinkers, creative and innovative minds to proffer ideas and even to control, develop or utilize such robots (Stairs et al. 2018:313). To produce the skilled people, country will have to improve education system, and that starts by addressing big issues facing the education sector; poor infrastructure, lack of resource and the issue of overcrowded classrooms.

1.3.1 Infrastructure

Janse van Rensburg et al (2015: 393) states that skills development starts with investment in infrastructure, as good quality infrastructure facilitates teaching and learning. Harmoniously, Mthimunya and Daniels (2019:1) confirm that educational environment can comprise teaching and learning because if pupils or students are in unsafe environment, it means they will not be able to concentrate in class or even perform to their best ability. According to SABC Digital News (2017) out of 100 pupils who start grade one, 60 will reach matric and 4% will graduate with first degree. It is clear that, as we go to fourth industrial revolution, the government will have to invest more on the infrastructure that will enable students to learn better and reach their potential.

1.3.2 Innovation

Fourth industrial revolution will mean that citizens must technically innovative in order to satisfy clients who will conveniently seek faster and cheap products and services (Hellriegel *et al*, 2017:470). To achieve the above mentioned, the education sector should revise or couple the current curriculum with elements that will foster creativity and innovation as a way to skill-develop kids from young age (Akoojee, 2012: 680). Relatedly, the content of the subjects should be aligned with the requirements of the complex world of technological advancement and be structured in such a manner as to meet the needs of the fourth industrial revolution to make the citizens relevant.

1.3.3 Solutions to the Challenges

The government should, through a Public – Private partnership, do the following to capitalise on new opportunities that comes with 4IR:

- Increase technology infrastructure “internet access” to the rest of the country, from Malelane to Zeerust and from Musina to Khayelitsha, including an increase in investment towards cybersecurity.
- Review or improve policies and regulatory frameworks to suit the current economy (e.g. policies that regulate mobile network organisation to make data cheaper and accessible and that of the labour market).
- Retrain or revamps skills of current workers for the new roles that comes with the shift.
- Empowering the entire education system through technology by introducing more tech curriculum and training teachers to be more equipped to transfer the knowledge.
- Capitalise by increasing employment and resources in the areas where work activity still require human interaction e.g.) nurses, doctors, psychologies, marketers, logistics.

Education can be deemed a public good that government underpinned as a constitutional right to all. As a result, Government needs to seize the opportunity that will be presented in introducing new skills. They would have to upskill a high percentage of the workforce with a focus on:

- Make building infrastructure a priority to house and handle the developments and industries that are going to boom. I.e. Connectivity and cost thereof should be accessible to everybody this to accommodate that the means of learning itself has to change.

- Encourage tertiary institutions to conduct market research and engage with private sector and understand the potential future skills needed
- Allow for different approach to education as some of your workforce has been out of formal education. One needs to allow for customized learning, ICT, self- learning and peer learning thus addressing the skills gap in the labour markets.
- The main effects of technology in the workplace are those mundane tasks that can be done by machines. Allow for the curriculum to longer focus on Memory based and repetitive tasks. Focus more on human intuition, creativity and tech based training for coding, robotics and Artificial intelligence.

1.4 Conclusions

Government's role is covered by enacting laws, and at times where private markets fail, an economic role for government may arise. Government does have inherent economic functions which are: to provide the legal and social framework. South Africa is facing a labour market failure if nothing is done to curb further Job Losses. There is no doubt that the 4IR in South Africa presents both opportunities and challenges. The 4IR provides an opportunity for South African education institutions to create an environment of creativity and innovation (Kayembe, 2019). School curriculum of basic education and higher institutions of learning have to be redesigned to supply the need. The government could subsidise entities in order to encourage upskilling. The current education system could be strengthened by investing in technologically focused schools e.g. mathematics, science, robotics and coding. Plenty can be done in this regard, however, the implantation of such policies remain imperative.

1.5 Recommendations

Based on the findings of this report it is therefore recommended that the government should take an inclusive approach to the economic problems facing SA. Stakeholders, government departments, academic institutions, industries, banking sector, youth representatives and many more should be included in the formulation of SA economic development strategy. Stakeholders should be heavily involved from the initial phase right up to the implementation phase. Skills development should take the centre stage of the strategy.

Current jobs must first be retained and secured. Firms and companies should be supported to prevent further job losses. Sound decisions should be taken to support and empower small and medium enterprises as well as entrepreneurs. This step would highly stimulate SA economic growth due to the fact that economy increase as more players are participating in it.

1.6 References

Africa Digitisation, productivity and job creation, Johannesburg: McKinsey South Africa. sa, 2019. Quartely Labour Force Survey, Quarter 3:2019, Pretoria: Government Printers.

African Journal of Public Affairs, 11(3), pp. 89-91.

Akoojee, S. (2012). Skills for inclusive growth in South Africa: Promising tides amidst perilous waters. *International Journal of educational Development*. Vol. 32, (5). 674-685

Aksentijević, N. K. & Ježić, Z. 2019. Education and Reducing Income Inequalities - The Importance of Education in Maritime Studies. *Scientific Journal of Maritime Research*, 33(2): 191-204.

Atoko Haydee Kasongo. (2013). Youth wage subsidy as a possible solution to youth unemployment in South Africa. University of The Western Cape

Beall, Jo and Crankshaw Owen and Parnell, Susan (2000). The causes of unemployment in post-apartheid Johannesburg and the livelihood strategies of the poor. *Tijdschrift voor economische en sociale geografie / Journal of economic and social geography*

C Kayembe, D. N., 2019. Challenges and Opportunities for Education in the Fourth Industrial Revolution.

Frederick Fourie. (2013). Reducing Unemployment: Waiting for high growth? Waiting For Godot? University of the Free State, www.econ3x3.org

Implementation of the Geneva Conventions Act 8 of 2012:

https://www.acts.co.za/implementation-of-geneva-conventions-act-2012/1_definitions

Hellriegel, D., Slocul, J., Jackson, S., Louw, L., Staude, G., Amos, T., Klopper, H., Louw, M., Oosthuizen, T., Perks, S. & Zindiye, S. 2017. *MANAGEMENT*. 5th ed. South Africa: OXFORD UNIVERSITY PRESS

J.Janse van Ransburg CR McConnell, 2 nd South African Edition

<https://brainmass.com/economics/legislation-regulation/six-roles-of-government-44038> Page 393- para 3: Economics Janse van Rensburg, J., McConnell, C.R., & Brue, S.L. 2015. *ECONOMICS*. 2nd ed. South Africa: MaGrawHill education.

Mthumuny, K. D.T & Daniels, F. M. 2019. Student nurses' perceptions of their educational environment at a school of nursing in Western Cape province, South Africa: A cross-sectional study. *Curationis*, 42(1): 1-11

NDP is the National Development Plan (<https://www.gov.za/issues/national-development-plan-2030>)

Njuguna Ndung'u and Landry Signé; ForesightAfrica2020_Chapter5_20200110 Page 393
para 3: Economics The Department of Government Communication and Information Systems
Insight Newsletter Issue 13

Nomfanelo Magwentshu, Agesan Rajagopaul, Michael Chui and Alok, 2019. The future of work in South

Oluwajodu, F., Blaauw, D., Greyling, L., & Kleynhans, E.P.J. (2015). Graduate unemployment in South Africa: Perspectives from the banking sector. *SA Journal of Human Resource*

Ren, W. (2009). Thoughts on the Solutions to Problems in Vocational Education of the New Age. *Asian Social Science*. Vol. 5, (8).

SABC Digital News. 2017, 4 Dec. Poor Education System in Limpopo province [YouTube video]. <https://www.youtube.com/watch?v=Wlft00s4K1o&feature=youtu.be> Date of access: 7 April 2020.

Stair, R., Reynolds, G.& Chesney, T. 2018. Principles of business information systems. 3rd ed. China: RR Donneylley.

Stats SA (Statistics South Africa). 2019. Education series volume v. March 2019. (Statistics report). <http://www.statssa.gov.za/?p=12040> Date of access: 7 April 2020. Management/SA Tydskrif vir Menslikehulpbronbestuur, 13(1) Art. #656, 9 pages. <http://dx.doi.org/10.4102/sajhrm.v13i1.656>