

MBAA 813

Group Assignment

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Assignment Topic:

**WHAT SOUTH AFRICA COULD DO TO AVOID SHEDDING MORE JOBS DUE TO
THE FOURTH INDUSTRIAL REVOLUTION (4IR)**

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1. INTRODUCTION

The reality is that there is no economic law that states that everyone will benefit from an industrial revolution, and therefore it is possible for a majority to be left behind (*World Economic Forum, 2019*). This argument is substantiated by the *Principa* (*April 20, 2018*) by stating that, “we must develop a comprehensive and globally shared view of how technology is affecting our lives and reshaping our economic, social, cultural, and human environments”. South Africa is part of the countries that participate in an open economic system and therefore its policies should evolve with the application of the modern technologies. The Fourth Industrial Revolution (4IR) is a reality and it is irreversible in nature, and therefore both the developed and developing economies should craft and implement strategies that would be synergized to the rollout of the system.

The world has travelled the journey from the first revolution where steam mechanism become prevalent, the second revolution electricity was introduced, then follow the third revolution where computerisation and the birth of internet was presented currently the fourth Industrial revolution is about cyber-physical systemization, artificial cognisation and robotisation. The fourth Industrial Revolution has a great impact on the economy and job creation thus digital transformation is a necessary disruption in our social lives and the entire economy, in addition the first three industrial revolutions will influence the entire socio-economic spectrum. The rationale behind the fourth industrial revolution is to reduce the labour costs thereby applying the power of technological innovations to produce goods or render services.

As it is, our country is gravely affected by unemployment rate, one can't stop to imagine what will the technological advancement do to the physical job scales when the world become fully dependent on it. The fourth industrial revolution is the current and developing environment in which disruptive technologies and trends such as internet of things, robotics, virtual reality and artificial intelligence are changing the way we live and work. Although there have been uncertainty and fear of what this phenomenon would do to job losses, we can't disregard the benefits this would bring into our lives.

The recent pandemic of corona virus has shown that in the near future the human force will become more dependent on the use of technology more than anything. The effect of lockdown regulation set by the president during the 17 March, has demonstrated that technology is becoming the one source that is enabling humanity to connect. The roles and responsibility within the work force have now changed to working remotely for those sectors that are able to. Sadly, then, this is exposing the manufacturing and agriculture sector that will be more affected by fourth industrial revolution that, when workforce is not physically present production cannot be achieved as targeted and possibly there's a need to employ and make use of artificial intelligence whereby it can be controlled by one person.

The 4IR is a significant opportunity, despite the challenges faced by South Africa of inequality, unemployment and poverty, the government should strive to position its prerequisites in such a way that the entire citizenry benefit equally and fairly from it. Failure to have an inclusive approach to achieving the prerequisites to the fourth industrial revolution will result in a loss in opportunity, not only for the affected parties but also for the general economy of the country.

2. PERCEPTIONS REGARDING THE FOURTH INDUSTRIAL REVOLUTION

4IR should be given the necessary benefit of the doubt it deserves, therefore nothing can be loved or hated until it is known. The advent of the fourth industrial revolution will have intended and unintended consequences in the economic, especially on jobs which implies that there is a potential of job creation opportunities but at some instance's jobs will be shed. Currently, the South African unemployment hovers around 29% and the youth constitute the highest percentage of the statistics; and therefore, the government should strike a balance between the fourth industrial revolution and job opportunities. There is narrative that says the triple challenges of poverty, unemployment and inequality are ascribed to the country's poor education system.

3. CONSEQUENCE OF HIGH UNEMPLOYMENT RATE AND EDUCATION SYSTEM IN SOUTH AFRICA

3.1. High unemployment rate

According to an Insight Newsletter Issue 13, by the Department of Communications "In 1994 the unemployment rate stood at 20.5 percent for the standard definition and 31.4 percent for the expanded definition. In the first quarter of 2014 the standard rate of unemployment stood at 25.2 percent and the expanded rate was 31.5 percent. South Africa experiences a situation where there is a surplus of unskilled and low skilled job seekers. Caused by historically low levels of investment in African education."

South Africa's unemployment rate was announced to be at 29.1 percent on the fourth quarter of 2019. Although the government has tried to come up with initiative to curb the unemployment rate, it has become evident that it is certainly not enough. Furthermore, the effect of 2008 global recession whereby the consequences thereof has left many workers without jobs. This meant that companies could no longer afford to employ more people and had to reduce the workforce, therefore contributing to the unemployment rate in the country. With the recent coronavirus pandemic that has engulfed the world and that is anticipated to cause most business to close down due to lockdown regulation imposed by the government. There could result to an unexpected global recession due to the economy being stagnant.

3.2. Poor education system

From a country that has suffered a legacy of apartheid and poor education system, there have been some researchers that shows that the deliberate exclusion of black people from the educational system and from skilled occupations under apartheid contributed to high rates of unemployment today.

The President acknowledged that the current education system does not respond to the needs of the current labour market and therefore it has the potential of producing skills that will not be absorbed in the digital world. The summit was geared at advancing pragmatic proposals that could be applied to protect and promote job opportunities during the advent of the digital era; and the proposal would inform and shape the country's education system both for basic and tertiary education levels

4. INTERVENTIONS REQUIRED TO SAFE JOBS IN SOUTH AFRICA

The government in consultation with and the support of businesses, non-governmental organizations, and trade unions are responsible for creating enabling environment for sustainability of the existing companies and for the establishment new ones. This could be realized if all strategic partners could enter into a social pact in the form of a policy as a measure of clarifying roles and responsibilities each partner should play in the creation and protection of jobs in the country.

4.1 Radical transformation of the education system

Different fields have different challenges and therefore requires different solutions. For example, the education system must be revised and be aligned with the fourth industrial revolution. According to Manda and Backhouse (2019:249) South Africa lacks when it comes to science and math in schools when compared with other countries from BRICS. This is a result of the socio-economic and socio-historical factors which the government is still working on. Those are the subjects that equip individuals with necessary skills in this fourth industrial revolution. That identified gap means the curriculum at schools must be changed. Priority should be more on IT and creativity to make them employable in this era.

4.2 Re-skilling programmes

The 4th Industrial Revolution has a direct and indirect bearing throughout all professions ranging from banking, healthcare, and teaching to mention but a few. It is against this backdrop that there is a need for the professional class to re-skill themselves. The government should review the Skills Development Levies Act 9 of 1999 mainly primarily to cater for critical skills that are required for the 4IR

4.3. Up-skilling programmes

Training and teaching that needs to take place must be conducted by knowledgeable people. Educators play an important role in the introduction of the fourth industrial revolution. About new schools will be built in Gauteng worth R800 million (Mvumvu, 2020:9). Therefore, teachers will be in demand. Instead of employing teachers from other countries to equip the school children for this revolution, the government might want to invest in training educators in facilitating relevant subjects in line with the necessary skills to acquire.

4.4. Government Policy review

What government should do to avoid jobless in the 4IR, they must review their policies to empower private businesses. The government policies and strategies should be looking at incentives initiatives that could sprung interest for entrepreneurship especially within the innovation and/or manufacturing sectors. Government should come up with policies that will enforce cohesive relationship between private business and public sector. Some of the factors that government may do is to amend its tax regulations by considering lowering tax rebates for business owners or even lift tax rate on business affected by automation or artificial intelligence. There should be more assistance to self-employed people and accessibility of capital should be institutionalised to those who starting their own businesses. In contributing towards the development of education government can at an early stage of education, exposes the minds of learners to be creative and innovative by embedding the skill in the curriculum.

5. THRIVING IN THE DIGITAL WORLD

It stands to reasoning that to some extent labour would be required to execute certain roles and responsibilities that cannot be performed by the modern technologies. The optimists are of the view that the sharp increase in the application of automated machines will create new roles for humans who will have to polish their skills to keep pace with the paradigm shift associated with the 4IR. This is corroborated by the World Economic Forum (2019) by emphasizing that, “you want to do things machines cannot do well, and you want to be working with machines, not competing with them”.

5.1. Ride hailing apps

Ride hailing apps such as Uber, taxify and i.e. are some forms of the 4IR that have created job opportunities in the country. The innovation has necessitated an effective transport system considering the fact that the operators could easily maximise their profits and the commuters on the other hand can reach their destinations within a short space of time and credit cards are linked to ride hailing services

5.2. Innovative invention

The government being one of the biggest employers in the country, it also must support self-employment to get some weight of the employment responsibilities off its

shoulders. The fourth industrial revolution provides a platform for innovators to invest in their ideas. Troskie (2017:1), Xu (2018:90) and Bayode *et al.* (2019:343) share the same idea that 3D printing technology is an important part of 4IR and that assists with reduction of production costs. The University of Pretoria in partnership with University of Leicester developed a face mask using 3D printing technology that detects active Mycobacterium Tuberculosis 66% better than the sputum tests (Ntuli, 2020:3). Government can fund such innovations to support individuals in the research fields and universities which will improve self-employment.

5.3. *Entrepreneurship*

We are at the view that the South African government should develop strategies that would promote and support the culture of entrepreneurship especially in the manufacturing sector. Our country is rich in mineral resources, but the reality of the matter is the country does not have the technical know-how of converting the mineral resources into final products which is why they are exported somewhere else. The country does not benefit from the opportunities presented through the entire value-chain of transforming raw materials into finished products. For instances, only few people in the country have the required skills to cut or polish diamond; and this is one but not the only avenues that emerging entrepreneurs should explore.

5.4. *Opportunities in the banking sector*

Major commercial banks such as Standard Bank, ABSA, FNB and Nedbank are at an advanced stage of replacing their tellers with automated machines. For the tellers to remain relevant in the banking sector their career should be channelled towards human resource management, information technology and auditing. Instead of retrenching their tellers, the banks could appoint them as low-level auditors mainly for monitoring branch operations.

5.5. *Opportunities in the restaurant industry*

Restaurants will still require labour force for performing tasks that could not be performed by automated machines. There is also a need to capacitate waiters and waitresses in terms of skills associated with professional cooks.

5.6. *Arts, culture, sport and recreation*

The National Department of Arts, Culture, Sport and Recreation should enhance its programmes and projects that are geared at promoting talent identification, development and support. The Department should create enabling environment for artists and athletes to compete domestically and internationally as a measure of necessitating them to generate an income from their talents. Television and film industry is in demand for men and women who possess the required skills in relation to content development, script writing and performance to mention a few; and such skills cannot be replaced by automated machines. We therefore propose that the government should establish film commission offices throughout all nine provinces mainly to stimulate interests, mentoring and coaching of people aspiring to benefit from opportunities presented by the industry.

5.7. Artificial Intelligence

The stock markets globally are no longer manned by human beings, instead people are now applying computers to trade. Because of this markets have become more rational and rational markets are more efficient (*Marwala, December 18, 2018*). The stock markets are in demand of data analysts primarily for analysing data collected through artificial intelligence system.

6. CONCLUSION

South Africa like other countries throughout the world should brace itself for the challenges and opportunities that are associated with the implementation of the 4IR. The government in consultation with businesses, non-governmental organizations, academic institutions and labour unions should jointly develop a strategy that could be applied to expedite the process of skilling and re-skilling the labour force as a measure of preparing them for job opportunities that would be presented by the advent of the 4IR. The South African education system, from school to tertiary levels, should be transformed in accordance with the requirements of the modern digital world. The government should strive to produce a large number of people who possess the required skills that will become applicable during the advent of the modern digital world.

The time is now that the country should channel its limited resources towards mass production of critical scarce skills that are required for transforming raw materials into final products; this intervention has the potential of promoting industrialization and ultimately creating job opportunities. The government should eradicate all the unnecessary barriers that are hampering the marginalized groups from participating in the mainstream economy especially in the manufacturing sectors. Access to funding and licences are some of the factors that are perpetually disadvantaging the marginalized groups from penetrating certain sectors that are dominated by the minority groups. The marginalized group should benefit from the opportunities presented by the value-chain related to the extraction of the raw materials until their conversion into the final products.

The 4IR should be seen as a challenge rather than a potential problem to the society. Preparation is very important to ensure a fruitful relationship with this opportunity. However, resistance to adapting the new methods of living and working should be expected and recognised as part of the challenges. Boyade *et al*, (2019:345) warns against that resistance in mindset. As far as South Africa's E-rediness according to the World Economic Forum (2018:12) report it is showing improvement scoring 45, however, that does not suggest a battle won. There is still a lot of improvement that can and should be done.

Whether or not the government has invested towards the progression of internet and autonomous machines, reality is that even the government operations will also be grossly affected. The business will be performing its operations on the internet and business processes controls that are systematic, processes such as supply chain without human input. Evaluating how the government processes has been perceived as flawed and unjust in terms of service delivery. It can be believed that the use of robots would eradicate the perceived dull aspect of its work and allow human to focus on more challenging and fulfilling task leading to an overall happier and more productive society. When the fourth industrial revolution has reached its full maturity it's going to impact all countries and all industries

Lastly but also of importance, the citizenry at large should come up with innovations that would enable them to make a living from opportunities offered by the 4th Industrial Revolution. They should inculcate the culture of "thinking out of the best" within their

family circles and they should also solicit adequate information regarding the prerequisites of the 4IR and the opportunities associated with it.

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