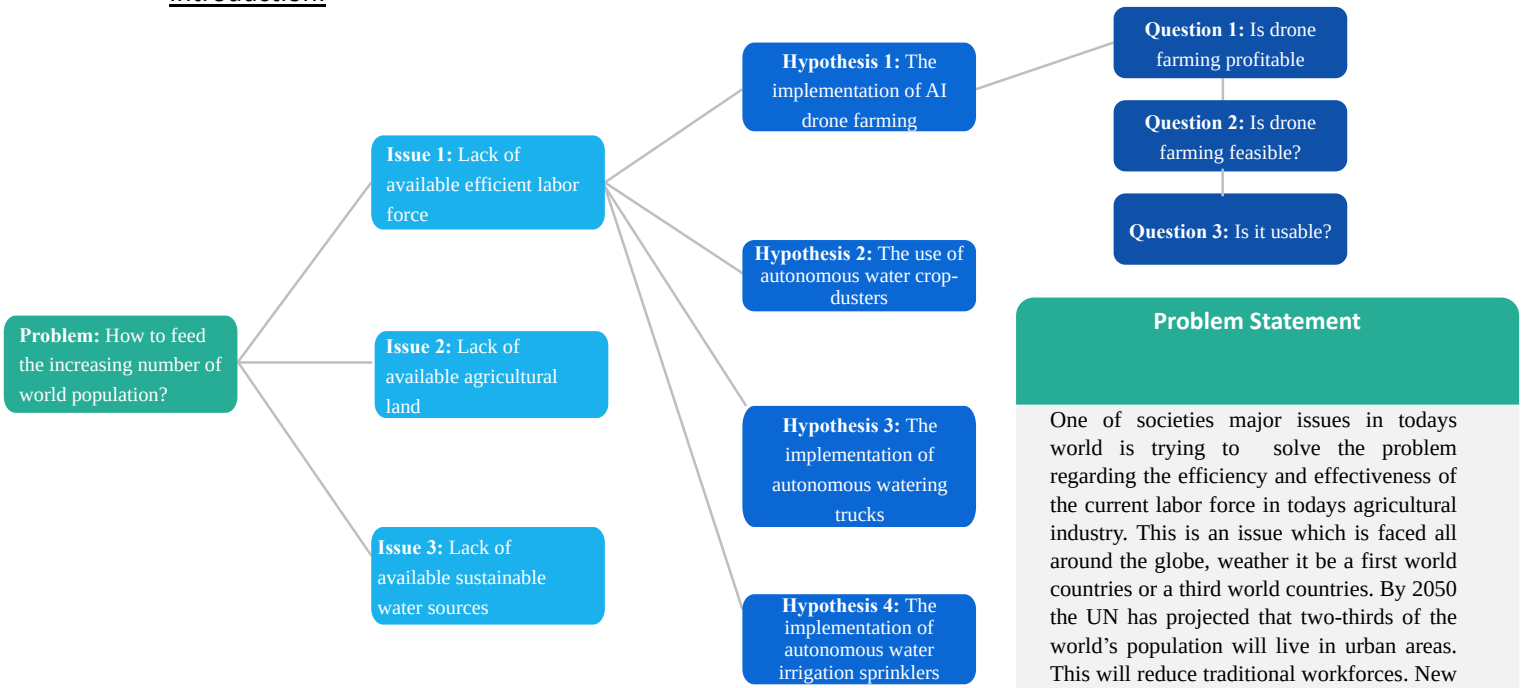
HULT
INTERNATIONAL
BUSINESS SCHOOL

Report

Future Mindset:

By Eric Mabuza

Introduction:



Problem Statement

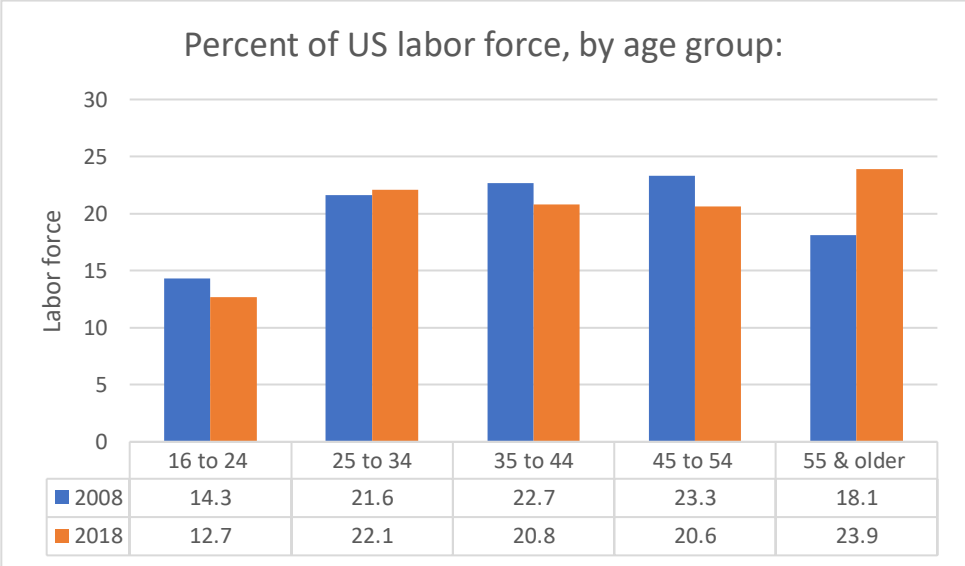
One of societies major issues in todays world is trying to solve the problem regarding the efficiency and effectiveness of the current labor force in todays agricultural industry. This is an issue which is faced all around the globe, weather it be a first world countries or a third world countries. By 2050 the UN has projected that two-thirds of the world's population will live in urban areas. This will reduce traditional workforces. New technologies such as drone farming, vertical farming and sourcing water through the collection of water residue from surrounding plant life. Operations will be done remotely. This will lead to automated processes and risks and issues in the labor force will be easily identified and solved. This is shifted the new trend in agricultural farming which has called for farmer's skills to be a mixture of technology and biology skills rather that pure agricultural abilities.

Analysis:

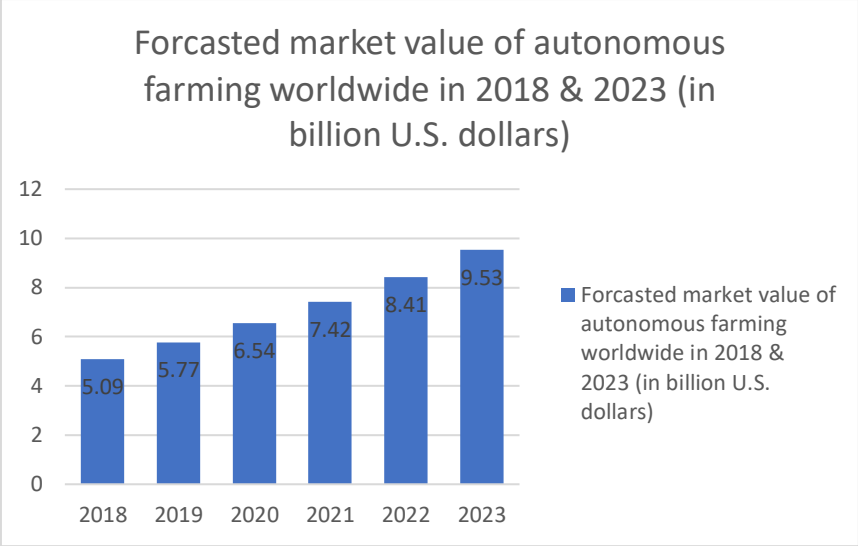
Taking into consideration the drop-in labor force since 2008 and 2018, it is clear to see the amount of people who have decided to take up traditional work methods has started to decline. This decline in labor force can be seen in ages 35 to 54. This has been due to many different factors such as:

- Growth in technology
- Regulation labor drops
- Trade union issues
- Availability of remote jobs

By implementing solutions such as autonomous machines in the agricultural workforce, this issue could be resolved in an efficient and sustainable manor. Smart farming has been projected to reach a growing global market cap of $9.5billion (Joe Aki Ouye, 2011) (statista, 2020)



By taking a look at the projected market value of autonomous farming worldwide. It is clear to see there is growth as the market value is estimated to have doubled in 5 years (Statista, 2020). This is a clear indication to see that there is room for to generate profits in this sector. By implementing such a new innovative method such as Hypothesis 1 it is assumed that is will be profitable. This shows that the current assist's will be able to cover the current liabilities as this is a capita intensive industry.



Key Findings:

STRENGHT

- By implementing autonomous drones in the agricultural workforce, there will be a diverse product line offered to farmers in order to for fill their labor needs. Overall efficiency can also be increased through this implementation as AI has proven to be an effective method in productivity by 30% (Olson, 2015)

WEAKNESS

- The implementation of autonomous machinery can be very expensive. When combining with drone technology and water filtration systems those cost's can be inflated. Assuming the materials used in order to produce this machine are like that of existing product and autonomous filtration software cost off the same assumptions, it would cost $10,000-$15,000 to manufacture. The Research and development cost are based off industry history would be roughly $200 - $300 Million (Goldmansachs , n.d.)

S W T O

THREAT

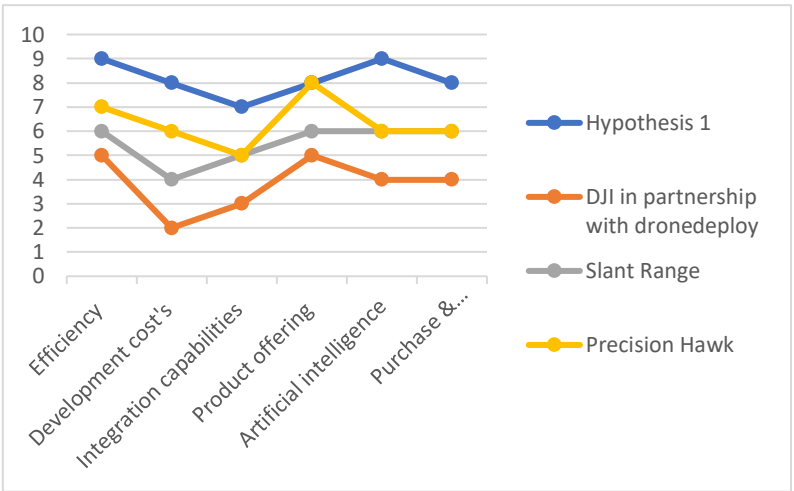
- The threat of poor infrastructure in place in developing countries or areas which will make the implementation difficult and costly.
- Due to certain government regulations and policies, the implementation of such digital solutions might not be welcome as there are strict labor laws such as South Africa's labor relations act 66 of 1995 (South African Government , 2020)

OPPORTUNITY

Through the implementation such innovative AI drones in Agri-tech there is potential to resolve the problem regarding the up coming world food shortage supply. This is a solution which can resolve or alleviate this worldwide problem

Competitive analysis & Advantage:

When looking at the competitive landscape of drone framing on the agricultural space there are a few key players such as DJI, Slant Range and Precision Hawk. All these organizations offer impeccable drone farming solutions which are performing well. By implementing hypotheses one which is based off of drone farming using renewable sources of water (Patel, 2017)



it is clear to see how the value offering is different. Currently the drone farming industry has captured value and is unable to take that value and transform it to the next level. By looking at the conducted strategic canvas it is clear to see how Hypothesis 1 has room to take this trapped value and transform it into a new and emerging market. (Strategic Canvas Key: bad =1 / Good= 10)

Trends in Agricultural technology:

- Internet of things is becoming a huge source of innovative and developing methods of farming due to increasing affordability and ease of installation.
- Key suppliers have taken up new methods of farming and have ditched traditional methods. These integrated farming management solutions which account for huge amounts of critical data and farm asset connectivity which is responsible of improving the efficiency and utilisation of existing farm assets.
- Unmanned vehicle or UAV have been introduced into farming. Research has shown that eventually in the future UAV will be responsible for 80% of farming.

Conclusions/ Next step:

Agricultural technology is a fast-developing industry aimed at solving a lot of societal needs. Through the implementation of such a new innovative drone farming irrigation system not only will this have an effect on the labor force I the agricultural sector, but this could be a possible solution to solving the water shortage crisis. Hypotheses 1 is able to generate its own water source in order to distribute it through the drones. This essentially acts as a production line which can be ran fully autonomously and the farmers and monitor all risks and progress remotely. This idea is a great way of solving a global issue get still transforming trapped value into new value for the agricultural sector

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