



THE IMPACT OF THE MINIMUM WAGE ON UNSKILLED LABOUR

Supervisor: Sally Fisher

*I hereby declare that the Research Report submitted for the _____ degree to
The
Independent Institute of Education is my own work and has not previously been
submitted
to another University or Higher Education Institution for degree purposes.*

Wolfgang Keyser

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The Impact of the Minimum Wage on Unskilled Labour

Introduction

Contextualisation

Poverty is a growing problem (Kneebone, 2014; Quintal, 2017). American CEO and executive pay has risen at a faster rate than non-executive pay, consequently this has cast a spot light onto the issue of minimum wage as well as the plight of the poor (Semuels, 2017). In the American context, this has caused much lobbying and pressure to increase the minimum wage. Consequently, some states have instituted higher minimum wages, some up to \$15 per hour. This has led to many businesses firing staff or reducing their hours (Boehm, 2017). This increase has especially hurt small/low margin businesses and the proposed changes leave little room for negotiation (McSwain, 2016). According to McSwain, (2016), some businesses will automate, while other will also cut benefits such as accrued income instead of leave, vacation days, et cetera. Research has shown that minimum wage hikes are ineffective and damaging (Sabia, 2014).

In the South African Context, minimum wage hikes propose a major challenge as well. According to [Businesstech.co.za](http://www.busetech.co.za), (2016), a minimum wage increase would result in disemployment of many unskilled workers. In response to politicians decrying economic equality (SA Gov, 2017), policy makers have proposed minimum wage hikes. However, research suggests that this is an ineffective and damaging tool to use to correct poverty (Sabia, 2014).

Overall, the inequality amongst unskilled workers needs to be addressed in both US context and South African context (Reeves, 2017). This provides a major challenge for entrepreneurs and corporates alike. Policy makers need to be made aware of the implications of minimum wage and explore other avenues of poverty alleviation such as the Earned Income Tax Credit in the US context (Marr, DeBot, Sherman and Huang, 2015), (The Employment Policies Institute, 2017) and the Youth Wage subsidy in South African Contexts (SA Gov, 2017).

This literature review has explored the chosen paradigm, theory and theoretical foundation, concepts as well as key themes. These themes are: “The general debate on the minimum wage”, “The impacts of a minimum wage”, “The associated benefits and disadvantages of the minimum wage” and “Alternatives to a minimum wage”

Rationale

The layout of this rationale is informed by the format described by Maree et al., (2016)

This topic of research is being pursued by the researcher for multiple reasons. The researcher possesses a high level of interest in libertarian politics. Consequently, the researcher has interests in libertarian economic, foreign and domestic policies. Libertarianism, adopts a very market oriented approach towards economic, monetary and fiscal policy. It is fiscally conservative (Cato Institute, n.d.). Thus, the researcher's undergraduate degree (IIE Bachelor of Commerce in Strategic Management) aligns with libertarian economic thought. One of the main concepts in libertarian thought is founded upon market forces and the law of supply and demand (Powell, 2013). This law applies to the supply and demand for labour, skilled and unskilled alike (Powell, 2013). With international and local news being dominated by talks to raise or institute minimum wage (Rugaber, 2015), (SA Gov, 2017), the researcher saw an opportunity in this research task to contribute to the existing body of knowledge and to assist in uncovering what the researcher perceives to be false thought and justification for minimum wage legislation (Cornell University Law School, 2017) (US DOL, 2017).

This research is worth conducting as it has provided insight into how wages are determined, why minimum wages harm unskilled workers as well as give insights into how unskilled workers can improve their income (Cato Institute, 2007). [200]

Problem Statement

The layout of this problem statement is informed by the format described by Maree et al., (2016)

Poverty is a growing problem (Kneebone, 2014), (Quintal, 2017). American CEO and executive pay has risen at a faster rate than non-executive pay, consequently this has cast a spot light onto the issue of minimum wage as well as the plight of the poor (Semuels, 2017). In the American context, this has caused much lobbying and pressure to increase the minimum wage. Consequently, some states have instituted higher minimum wages, some up to \$15 per hour. This has led to many businesses firing staff or reducing their hours (Boehm, 2017). This increase has especially hurt small/low margin businesses and the proposed changes leave little room for negotiation (McSwain, 2016). According to McSwain,

(2016), some businesses will automate, while other will also cut benefits such as accrued income instead of leave, vacation days, et cetera. Research has shown that minimum wage hikes are ineffective and damaging (Sabia, 2014).

In the South African Context, minimum wage hikes propose a major challenge as well. With According to BusinessTech.co.za, (2016), a minimum wage increase would result in disemployment of many unskilled workers. In response to politicians decrying economic equality (SA Gov, 2017), policy makers have proposed minimum wage hikes as well as as the possibility of a R20 national minimum wage (Mail & Guardian, 2017). However, research suggests that this is an ineffective and damaging tool to use to correct poverty (Sabia, 2014).

Overall, the inequality amongst unskilled workers needs to be addressed in both US context and South African context (Reeves, 2017). This provides a major challenge for entrepreneurs and corporates alike. Policy makers need to be made aware of the implications of minimum wage and explore other avenues of poverty alleviation such as the Earned Income Tax Credit in the US context (Marr et al., 2015), (The Employment Policies Institute, 2017) and the Youth Wage subsidy in South African Contexts (SA Gov, 2017).

Research Goal & Research Question

The layout of this purpose statement is informed by the format described by Maree et al., (2016)

The purpose of this study is to measure the impact of the minimum wage on unskilled workers using tools such as meta-analysis and desktop research. The main objective of this study is to demonstrate using descriptive statistics and thematic analysis, that increasing the minimum wage will cause disemployment and therefore policy makers should avoid its use as a poverty alleviation tool (Sherk, 2017).

The study has focused on unskilled workers/labourer's. Using data collected in a quantitative manner, the researcher will analyse the quantitative data as well as provide a thematic analysis. With this data the researcher hopes that the findings will contribute to the existing body of knowledge in addition to provide valuable data for those in local and international government to aid their decision making in regard to policy regarding minimum wage.

Research Objectives

This mixed methods study has two key research objectives in mind. These are:

1. To quantify the effect of the minimum wage/or wage increases on unskilled labour.
2. To Identify alternative methods for providing assistance to the unskilled working class.

However, this study will make use of extensive data analysis and therefore quantitative methods. This will be done using descriptive statistics and by analysing tables, graphs and calculations. A quantitative study can be defined as research strategy that insists upon quantification during the collection and analysis of data. Quantitative research seeks to measure and analyse data through statistical and mathematical methods. In quantitative study, data is collected using techniques such as polls, questionnaires, surveys and desktop research and is numerical in nature (Libguides.usc.edu, 2016), (Du Plooy-Cilliers, Davis & Bezuidenhout, 2014).

The use of descriptive statistics allows the research to be interpreted by a wider audience rather than those with knowledge or insight into quantitative tools or research. The data will be assessed and then concluded by the researcher (Du Plooy-Cilliers, Davis & Bezuidenhout, 2014).

Assessment of literature

The minimum wage is a controversial and well contested topic. There are many opinions and studies on the minimum wage. Some suggest that there are positive results from having a minimum wage. This review contains studies on the minimum wage and interviews with renowned economists. There are opinions and research that suggest there are negative results. There is also some research that suggests a minimum wage causes mixed results. However, most research and from observation of the economy suggest that the results of a minimum wage are negative. In order to contextualise the literature in this research paper, three research objectives have been explored. These are 'What is the general debate on the minimum wage?', 'What are the impacts of a minimum wage within a South African context' and 'What are the associated benefits and disadvantages of the minimum wage within a South African context?'.

Theoretical Foundation

There are numerous sources and empirical studies supporting the notion that raising the Minimum wage causes negative effects and provides more negative effects to the economy and society as a whole (Sabia, 2012). However, this review has focused on one such theory. This theory is the Neo-Classical Economics Theory (Sabia, 2012).

The Neo-Classical Economics Theory has its origins built upon the Classical Theory of Economics. This theory, founded in the 18th century was theorised by the renowned Adam Smith (whose works would have a great influence on the Founding Fathers of America as well as many modern-day economists) and David Ricardo. This theory was refined further in the 19th and 20th centuries by Alfred Marshall, Vilfredo Pareto, John Clark and Irving Fisher (Sabia, 2012).

The Neo-Classical Economics Theory (also referred to as Supply Side Economics), is a theory that focuses on the efficiency of the market and market forces. This theory postulates that changes in the market occur from changes in supply and demand, which result from amongst others, the actions of consumers, firms, labour etc (Mehmetaj, 2016). This theory states that the economy will always run at its maximum efficiency and always aims to achieve equilibrium in regard to supply and demand, and any deviation from equilibrium under this model is temporary and the market will be self-correcting provided there is no regulatory interference. Such as a minimum wage (Mehmetaj, 2016). Another important note is that this model projects that if the market is left to its own devices (flourishes through the

ease of starting and growing business), total employment will occur. Therefore, government intervention is not needed and is rejected (Mehmetaj, 2016).

There are many reasons why this theory is relevant to this research field. Since the subject matter being investigated is the negative impacts of a minimum wage. Neoclassical economics explains the motivation behind responses to policy change e.g.: retrenching staff or not hiring new staff if a minimum wage is implemented or hiked as an artificial price floor has been placed on labour (Mehmetaj, 2016). Since the minimum price maybe more than the labour is worth, various reactions may take place. Since Neo-Classical also uses Elements of Supply Side Economics, when the price of something increases, quantity demanded decreases (Mehmetaj, 2016). Also, Neo Classical economists also conclude that government interference in the market is unnecessary and unnatural as it interferes with the economies natural cycle (Mehmetaj, 2016). The theory goes on further to state that the economy is self-correcting and determines prices through the laws of Supply and Demand (Mehmetaj, 2016). The theory also suggests that government inference is bad as it will throw the economy into a state with either excess demand or excess supply. IE, the labour market will be out of equilibrium (Mehmetaj, 2016).

The Neo Classical Economics theory when applied to the labour market, demonstrates that an individual is paid in proportion of the economic value they create and that it would be illogical for a minimum wage to be set as there are people in the economy whose economic value they produce would be lower than the proposed minimum wage (The Cato Institute, 2007). Realistically if a worker wants to get paid more, they must increase their productivity and or skills (The Cato Institute, 2007).

The general debate on the minimum wage

One of the most prominent sources against the minimum wage is renown economist Milton Friedman. Milton Friedman has multiple qualifications in Economics and even went on to be a Nobel Prize Laureate in Economics (Econlib.org, 2016). These accolades are a testament to his integrity and adds credibility to his stance. He is vehemently against the minimum wage. Milton argues that the minimum wage causes more problems as well as having a negative effect on employment. Friedman argues that the minimum wage causes more unemployment (The Hoover Institution, 1968). This is due to the concept of price floors as well as the laws of supply and demand. This law is one of the fundamental laws contained within Neo-classical economics (The Hoover Institution, 1968). This law proposes that when

a price floor is placed above the equilibrium price (the price where supply and demand intersect), demand goes down for the particular good (The Hoover Institution, 1968). In many video interviews, he also suggested that minimum wages increase for some are at the expense of others. This is also true for South Africa where according to (Businessstech.co.za, 2016), it is stated that a minimum wage may benefit some people, it ignores those unemployed and seeking work. It is also suggested that it hurts these individuals more as it artificially increases their cost of labour to an employer making it harder to find someone willing to employ them (The Hoover Institution, 1968). Friedman also suggests that minimum wages cause a deadweight loss to society in the form of employers also being unable to employ more people (Milton Friedman on Minimum Wage, 2016).

Some literature suggests that minimum wage serves no purpose as there are few people earning it (Sabia, 2012; Sherk, 2013). It is also reported that most workers earn above the minimum wage (Sabia, 2012). It can be assumed that this is due to the economic value they contribute to their employers, justifying a higher wage (Sabia, 2012). Therefore, a logical conclusion to draw from this would be that raising the minimum wage has little positive effect as there are only few people on it (Sabia, 2012). Therefore, the blunt instrument of minimum wage increases is ineffective at uplifting the poor and that the use of more effective welfare schemes such as tax credit is more effective at helping the poor (Sabia, 2012). A similar concept has been applied here in South Africa in certain areas in the form of a wage subsidy (Steyn, 2016). When an employer pays a worker, the employer can claim a percentage of the wage back from the government. This can be as high as 50% in the first year of employment (Steyn, 2016). This model is also effective as it would allow workers to obtain skills which can then justify a minimum wage or higher in the future. I.e.: the minimum wage won't be higher than their economic value. However, this scheme is only for the youth (Steyn, 2016).

What are the impacts of a minimum wage

Due to South Africa's past, many leaders in the current government as well as various representative bodies i.e.: trade unions, Congress of South African Trade Unions and even opposition political parties are calling for a minimum wage, minimum wage hike in certain sectors or even a national minimum wage in the effort to assist in alleviating poverty (SABC, 2017; Wicks, 2017). This national minimum wage would affect all those who are formally employed. However, prominent award winning South African Economist, Dawie Roodt is vehemently opposed to the introduction of a national minimum wage (Roodt, 2016). Roodt,

a self-described libertarian, suggests that if a national minimum wage were to be put in place disemployment would occur (Roodt, 2016). This would be further exacerbating to South Africa's already high unemployment rate. The standard application of Neo-Classical Economic theory supports this as an artificial price floor reduces quantity of labour demanded (Sabc.co.za, 2016).

Another Economist by the Name of Mike Schüssler has also raised concerns with the minimum wage (Businessstech.co.za 1, 2016). Schüssler is an economist at the Economist.co.za. Schüssler argues that a minimum wage would be ineffective as workers are already being paid above the minimum wage (Businessstech.co.za 1, 2016). In doing his own research, Schüssler discovered that formal sector wages were often higher than the proposed minimum wage (Businessstech.co.za 1, 2016). He derives this information from the National Credit Regulator where loans are processed. Here it states that the median wage is higher than the proposed minimum (Businessstech.co.za 1, 2016). He also quotes tax statistics. He found that the majority of people working in the formal sector paid income tax, meaning they earned more than R6000 a month, which is way above the minimum wage (Businessstech.co.za 1, 2016). In other words, the minimum wage that is supposed to aid those employed in the formal sector, would not aid them at all. This is similar to the findings by (Sabia and Burkhauser, 2010). To address the problems in the US, Sabia and Burkhauser recommended use of the Earned Income Tax Credit (Sabia and Burkhauser, 2010). Once again, South Africa can apply the use of the youth wage subsidy. This differs from the EITC differently, however, it does achieve hope to achieve a similar result. Here it pays employers a subsidy when hiring worker. Allowing youth to find employment and thus find upward mobility in the employment environment resulting from skill learned (Levinsohn, Rankin, Roberts and Schöer., 2014).

However, there are some shortcomings with this source of literature. Schüssler is not clear in regard to the age of some of the sources he is citing. Also, the sources do not state that those quoted in earning higher than the proposed minimum wage, perhaps work two jobs. It was not explored if these individuals have upward mobility into even larger paygrades.

What are the associated benefits and disadvantages of the minimum wage
There are many different positions on the effects of the minimum wage. Some studies find that there are positive effects (Hertz, 2005), some studies find this not to be the case (Sabia and Burkhauser, 2010).

In a study examining the effects of minimum wage increases, (Sabia and Burkhauser, 2010) make some interesting discoveries. In their study, they have consulted previous studies to discover that there had been no alleviation of poverty resulting from wage hikes (Sabia and Burkhauser, 2010). These studies suggest interesting points. They suggest that when the minimum wage is raised, the workers that keep their jobs sometimes see their income increase and are then able to move out of poverty (Sabia and Burkhauser, 2010).

Evidence in the Sabia and Burkhauser, (2010) study also find that like in prior evidence, worker's hours can be reduced to compensate for the extra expense. Another repeating element found in other sources, as found in this study is the fact that most poor workers already earn above minimum wage. An increase would be effective at helping their situation (Sabia and Burkhauser, 2010). This evidence is also true for South Africa as following Neo Classical Economics, the same will occur. According to Business Day Live, (2016), there are many ways to accommodate an increase in workers' wages such as cutting the wages of higher wage workers, reducing works hours and increased productivity demanded by the employer. However, many have to elect to reduced work hours, meaning the business has to do more with less (Business Day Live, 2016).

However according to Blaauw and Bothma, (2010), some areas can see small but meaningful increases to their wage with little unemployment. This was seen in a study by Blaauw and Bothma, (2010) where the effects of minimum wage was measured using domestic workers in Bloemfontein.

Another strong disadvantage is that a minimum wage will cause a lot of businesses to become non-compliant and ignore this minimum wage altogether. According to Nattrass and Seekings, (2015), high minimum wage laws encourage firms to shed low skilled labour, to allow healthy business operations. This is especially true in industry with high international competition. Minimum wage increases are often intended to help low paid, low skilled workers; however, these people are the first people fired when a minimum wage is increased or instituted (Nattrass and Seekings, 2015). However, there are some positive outcomes, for example in the non-tradable sectors (where there is little to no international competition) such as a job as a domestic worker, overall income increased although hours worked were reduced (Nattrass and Seekings, 2015) then compared this with a tradeable sector- forestry, where higher wages were not offset by the reduced working hours. Firms being noncompliant was also very high in this sector at 53% (Nattrass and Seekings, 2015).

Noncompliance also may pose another threat through changing technologies. As employees leave the firm, the firm may decide to mechanise or move into sector which require less labour (Seekings and Nattrass, 2016). When this happens on a large scale it presents a problem for the workers who have left the firm as there is nowhere else to go as other firms are also mechanising (Seekings and Nattrass, 2016). Here disemployment has occurred and the employee is legislated out of a job. This also provide evidence that national minimum wage should be rejected as effected of minimum wage vary by sector (Seekings and Nattrass, 2016).

Alternatives to the minimum wage

Some scholars have found more effective ways to alleviate poverty in lieu of raising the minimum wage. Most of these arguments form the opinion that the use more direct income redistribution such as the Earned Income Tax Credit (EITC) is more effective than raising the minimum wage (Sabia, 2014). Other methods to raising income can also be found in training and improving the skills of workers through direct investment in their skills and learning (Heckman, 2004; Henry, 2004).

One scholar who argues that minimum wage is ineffective at targeting the poor is Mark Wilson. This is because Wilson's findings have shown most of those on the minimum wage are not mired in poverty but are rather supplementary incomes to a family unit (Wilson, 2012). Wilson's research find that only 4.7% of those who are 25 years or older and who work a minimum wage job are in fact poor (Wilson, 2012). This has led to multiple researchers hailing the earned income tax credit as a better poverty alleviation tool. A prominent advocate for this poverty alleviation tool is Sabia, (2014). In his paper: *Minimum Wages: An Antiquated and Ineffective Antipoverty tool*, he criticised then US President Barack Obama for advocating for a federal level minimum wage increase without considering large quantities of available empirical data (Sabia, 2014). He criticized the poor target effectiveness of the minimum wage as it doesn't provide relief for the truly poverty stricken- the unemployed/retrenched. Sabia, (2014) cited that 57% percent of those who between the ages of 16-64 who were part of a poor family, worked less than 5 weeks a year- with this level of participation in the labour market, one could conclude that this demographic of people is unemployed. However, Sabia, (2014) does acknowledge that a small number of workers will be taken out of poverty resulting from the increase. He goes on to conclude his paper: *Minimum Wages: An Antiquated and Ineffective Antipoverty tool* by recommending that expansions to the Earned Income Tax Credit is much more effective for

poverty alleviation as it targets the poor and the expense is not directly borne by employers (Sabia, 2014).

Neumark, (2015) also remarked in his paper, *Reducing Poverty via Minimum Wages, Alternatives*, that the Earned Income Tax Credit should be expanded to better accommodate childless families/individuals.

However, these are measures that are still regarded as government interference in the labour market and are criticised for their large cost. (Edwards & de Rugy, 2017). However there are a few options for the unskilled poor. Heckman, (2004) has discovered that it is possible to raise the income of a person through upskilling and education, however it is an intensive, expensive and time consuming process. It is also a very iterative process with small gain over time. In some cases, earnings can be increased reasonably, but the investment according to Heckman, (2004) is too great. In *Race, poverty, and domestic policy*, Heckman says to achieve good, fast results that would be meaningful, an investment of \$50 000 dollars per person is required to increase their yearly earnings by \$5000 or \$100 per week. On the other hand, affordable work place training yielded little result (Heckman, 2004; Henry, 2004).

However, there are some gaps in this part of the research, such as employee ambition and motivation. Henry, (2004), argues that minimum wage is not intended to be a living wage and staying on it could point to an individual's ambition and motivation.

Conclusion to literature review

As seen in the provided sources, there is strong evidence that having a minimum wage, excludes certain people with low skills from finding employment. But increases to the minimum wage also disemploy people through legislating them out of work. Most of these people are unskilled and therefore have little job security. However, the target of a minimum wage increase is the poor. Evidence concludes that the free market should rather dictate the wage as this is the fairest determination of a worker's economic value. But if government do desperately want to assist those who are poor, that a wage subsidy is a far better option as this allows people to be employed with a smaller cost burden on the employer. Research shows the earned income tax credit to be more effective and targeted option for the poor. It also encourages firms to be compliant. A national minimum wage should be ignored as it will cause massive disruption and disemployment. Overall, this area of legislation should be constantly assessed and decisions should be made with the utmost care to avoid negative consequences.

Conceptualisation

A conceptualisation has been included to allow the reader to understand important and contextually specific definitions of words, terms or names.

Equilibrium Wage: Is the price of a wage that is determined by the free market. Where supply and demand intersect on the supply and demand curve. This is the most optimal price and presumes total employment with this model (Borjas, 2013).

Disemployed: Is to be put out of work, usually resulting from external forces such as regime change, war, policy or obsolescence of a product (Merriam-webster.com, 2016).

Earned Income Tax Credit: is a tax rebate for low income workers. If a worker earns more credit than what they pay in tax, it will be an income for this person and is a very targeted form of welfare and fiscal upliftment. It is only available to taxpayers with children or if they are between the ages of 25 and 65 and are for the most part not dependants on another person (IRS.gov, 2017).

Minimum Wage: Minimum wage can be defined as according to (Investopedia, 2007), as the lowest amount of compensation a worker is allowed to receive for performing labour. The minimum wage is usually constructed and implemented by the government and often varies by geographical location even within the same country (Legal Information Institute, 2017).

Upward Mobility: Upward Mobility is the ability of an individual to move up on the income and social class “ladder”. In essence increasing their quality of life, usually from low income to middleclass/high income (Merriam-webster.com, 2016)

Deadweight Loss: Deadweight loss is defined as the cost to society resulting from market inefficiency which is usually caused by government interference and protocols such as applying a minimum wage above the equilibrium price of labour. The deadweight loss in this case would be disemployment and reduced work hours. Also, there would be loss regarding the businesses as they cannot afford to hire as many workers (The Economic Times, 2017).

Wage Subsidy: A wage subsidy is a rebate on a worker's salary given to employers by government to encourage employment. It is usually a percentage of the salary that is paid for by the government. In South Africa this scheme is for the youth and the rebate can be as high as 50% (Cofesa, 2015).

Wage Indexing: Wage indexing is where the minimum wage of a state, city or county changes with inflation with the intent of increasing the buying power of low income workers (Fruits, 2009).

Research Design/Approach

A quantitative approach to research design can be defined as an approach that is numerical in nature that systematic test for cause and effect relationships. The results are often analysed through statistics (Du Plooy-Cilliers, Davis & Bezuidenhout, 2014).

The information in this study has been obtained, analysed and interpreted using mixed methods. This is primarily due to the nature of the study.

The purpose of this study is to find relationships in order to predict future outcomes (Du Plooy-Cilliers, Davis & Bezuidenhout, 2014). In this case, the prediction has been made that instituting a minimum wage will cause job losses. If this is found, a relationship has been established between employment levels and the existence of a minimum wage. This study has the objective of generalizing its outcomes (Du Plooy-Cilliers, Davis & Bezuidenhout, 2014). Once the data has been assessed using descriptive statistics, a conclusion can be drawn from the data and the findings can be generalised to low skilled labour who reside and work in the contiguous United States.

Therefore, once data has been processed, a conclusion can be generalised to the working force of South Africa. IE: the impact of a minimum wage will affect all low skilled workers in South Africa.

Data analysis is mixed methods comprising of quantitative and qualitative data. The quantitative data is comprised of data from secondary sources. These sets of data are tables, graphs and spreadsheets. This data is already processed and has been reinterpreted and a conclusion has be drawn using multiple sources. The data was interpreted by looking for patterns in the data as well as results from calculations.

Further, due to this research study seeks to dispel myths the researcher has approached the study through the paradigmatic lens of Critical Realism.

Time Dimension

This study has been conducted using a cross sectional design. With this design data tables are assessed once. This because the research being conducted is desktop research. A primary reason why this time dimension will be chosen for this study is cost and ease of execution. A cross sectional study costs significantly less than a longitudinal study. Also, the time burden is significantly less. Therefore, this study has been concluded in a shorter timeframe. The ease at which this study can be conducted is also a factor. The researcher will not need to make meetings or conduct interviews, the researcher will instead be inferring from data sets. Another factor for this ease is that the data is already transcribed.

Time Dimension of the data

The data in this study has been collected under a different time dimension. The quantitative data in this study was collected under multiple cross sections. This study uses quantitative data that was collected at multiple important dates. However, the data would have originally been obtained by that researcher/statistician over a set period of time, using multiple cross sections. The reason for this due to the nature of the study. The quantitative data measured employment levels at certain dates. More specifically, the researcher has looked at employment levels before the introduction/increase of a minimum wage and after the introduction/increase of a minimum wage. The original researcher already transcribed their data from their questionnaires/surveys into tables and graphs.

Reasoning Direction

The reasoning direction in this study will be deductive reasoning. This is also known as top down reasoning. This is where a theory and hypothesis are postulated. Then research is conducted to prove or disprove the theory and hypothesis. This reasoning direction begins at a very abstract level and then as the study goes on, become more concrete and specific. With this line of reasoning, the results are also generalisable. This theory also allows the testing of existing theories through conducting a research study. With deductive reasoning, the theory is constructed before the study is conducted. (Du Plooy-Cilliers, Davis & Bezuidenhout, 2014)

This line of reasoning is very appropriate for this research study. This is mostly due to the theory being an existing theory. Also, this theory follows the Critical Realist paradigm, in which the results from the study are generalisable. Also, this study explores the broad topic of the Impact of the minimum wage on employment levels, then a narrower and more

focused research takes place to determine at level of skill are worker effected. (Crossman, 2016). (Du Plooy-Cilliers, Davis & Bezuidenhout, 2014). Deductive reasoning also seeks to explain a causal relationship. This study is attempting to find a correlation between the minimum wage and employment levels. Should a relationship be found, it will attempt to explain this causal relationship. A final reason why deductive reason will be chosen for this study is that this line of reasoning allows for more control. As the researcher is testing the hypothesis, controls can be put in place to allow the researcher to ascertain for certain that indeed an independent variable is causing an effect on a dependant variable. In this case, by examining the problem through deductive reasoning (focused), a researcher can ascertain that it is the minimum wage (independent variable) that is causing an effect on the dependant variable (employment levels). (Du Plooy-Cilliers, Davis & Bezuidenhout, 2014).

Units of analysis

The units of analysis that will be used in this research study will be sets of data and papers containing statistical information. These are numerous tables and graphs contained within the appendix. This is official data that is recognized by the relevant authorities, or compiled data that is also recognized (Du Plooy-Cilliers, Davis & Bezuidenhout, 2014).

Population and Sampling

In this analysis, the data will be derived from multiple papers. However, there are three papers that will be emphasised in this analysis. These papers will be *“The Employment and Distributional Effects of Minimum Wage Increases: A Case Study of the State of New York”* by Dr. Joseph J. Sabia and Dr Richard V. Burkhauser 2008. *“Minimum Wages and Employment: A Case Study of the Fast-Food Industry in New Jersey and Pennsylvania”* by David Card and Alan B Krueger 1994. *“The Economic Consequences of Labor Market Regulations”* by Jesús Fernández-Villaverde.

Sampling

The data sets used in this study were selected through the use of purposive sampling. The researcher had selected criteria which was required to be present in the data. One of these characteristics is the presence of two data extraction points. These points are before a minimum wage is implemented and after a minimum wage is implemented. Using these criteria, the researcher chose the appropriate data sets for the research topic. However, the data that the original researchers used in their papers vary. For Card and Krueger, (1994),

purposive sampling was also used as the criteria for the sample in their study were fast food restaurants in New Jersey and Pennsylvania.

For the study conducted by Sabia and Burkhauser, (2008), the sampling method used here is also purposive sampling. The reason for this is Sabia and Burkhauser, (2008) were measuring the effects of the minimum wage on the unemployed. Therefore their sample needed to meet those characteristics.

Data Collection Methods

Data collected for this study will be derived from document and quantitative studies done on the minimum wage and will vary depending on the type of source or paper used. This can be done through exporting data from data tables and then importing it or through manual data entry. The latter will be avoided by the researcher as this is time consuming and error prone. In the case of exporting and importing data, Microsoft Excel will be used to draw inferences from the statistics and show patterns. However, there is the possibility of this process being simpler. If the researcher finds a set of data which simply shows number of people employed before a minimum wage increase and after the minimum wage increase, the researcher will simply be able to ascertain whether there was a net increase or decrease. However, this view could be regarded as too simplistic. The researcher will endeavour to make sure that these findings are not caused by other factors such as recession.

Data Analysis Methods

Data has been analysed using by examining tabulated and graphed data. Data analysis will also be mixed methods with the quantitative data being analysed using meaningful and unbiased tables and graphs. (Du Plooy-Cilliers, Davis & Bezuidenhout, 2014; Msdn.microsoft.com, 2016)

One of the common tools across these sets of data is "Difference in Difference". This test is a used test in the field of econometrics. Difference in difference is the chosen identification strategy. This is a strategy that allows researchers to document the effects of a treatment on a specific population (Labwrite, 2017). This is done by gathering data in a control group and the treatment group before the date that the treatment takes place. After treatment has taken place, researchers will then gather data on the control group and the treatment group. With this data, researcher will sort the data and apply it in a formula (Waldinger, 2017). This formula can differ based of what is being assessed however it always measures the following: the difference between Control Group before the treatment and the after the

treatment against the differences of the treatment group pre-treatment and post treatment (Waldinger, 2017). In the scenario of Card and Krueger, (1994), the control group (Pennsylvania) has its difference (between its pre-test and post-test employment figures) measured against difference (pre-test and post-test) of the treatment group (New Jersey).

Coding

Coding of data will occur once the data has been collected. Coding will be relatively short in this study as the research is only interested in two dimensions. This is statistical discussion. The researcher will obtain a set of data showing employment levels of a region prior to a minimum wage introduction/increase and after a minimum wage instruction/increase (Du Plooy-Cilliers, Davis & Bezuidenhout, 2014). The implications of this data will be discussed. A small thematic analysis will then take place discussing key themes identified in other papers.

Reliability of findings

Reliability in quantitative research can be defined as the degree in which an assessment tool yields constant and dependable results (Uni.edu, 2016).

Reliability is very important for quantitative research as it shows that the tools of data collection and measurement in the study are consistent. If a study's findings are to be deemed as reliable, the study needs to be able to stand up against scrutiny. The assessment tools need to allow this (Du Plooy-Cilliers, Davis & Bezuidenhout, 2014). One of the most common ways to determine if a study is reliable is to propose the scenario where another researcher quantifies or retests the data and arrives at the same/similar conclusion. In the proposed scenario, another researcher must be able to arrive at the same result/conclusion by using the same data set. This is inter-rater reliability Essentially; the same conclusion must be derived from the study using the same tools however with a researcher. This conclusion should not change significantly no matter how many times the data is retested. Other ways to test reliability would be to measure the studies levels of agreement, stability and equivalence (Du Plooy-Cilliers, Davis & Bezuidenhout, 2014).

However, reliability in a study can be skewed resulting from error. The measurement tools should be scrutinised as much as possible to reduce error (Du Plooy-Cilliers, Davis & Bezuidenhout, 2014). An example of a way to reduce error to test and refine questions against confusion or misinterpretation. Finally, for a study's findings to be considered

reliable, it must be generalisable. Since this study is a quantitative study, it will need to be generalisable (Du Plooy-Cilliers, Davis & Bezuidenhout, 2014).

In this research study, reliability will be ensured in several ways. Firstly, the data in the study have been verified and mathematically sound. This will greatly reduce error. Also, should the results be questioned: the data can be subjected to the inter-rater reliability test to check and verify if the same conclusion can be reached again.

Trustworthiness of findings

Due to the nature of this study being mixed methods, trustworthiness is also required for the findings to be accepted. For a study to be trustworthy it must have credibility, transferability, dependability and confirmability (Du Plooy-Cilliers, Davis & Bezuidenhout, 2014).

Validity of findings

Validity can be defined as the degree to which a test accurately reflects what is being measured (Du Plooy-Cilliers, Davis & Bezuidenhout, 2014).

For a quantitative study to be regarded as valid, the findings must accurately reflect the actual state of what is being measured. Findings must be accurate in order for them to be valid. Findings must also be representative (Du Plooy-Cilliers, Davis & Bezuidenhout, 2014). This is crucial as it allows the results of the study to be generalisable to the study's population. It is possible for findings to be reliable, but not valid. This is where the results from the measurement tool are stable and consistent, but are wrong (Du Plooy-Cilliers, Davis & Bezuidenhout, 2014). An example of this would be an uncalibrated scale. Here the scale measures weight consistently, but the result is that the subject weighs 5kgs heavier than reality. In this case, the measurement tool is reliable, but the results are not valid.

There are multiple types of validity in quantitative study (Du Plooy-Cilliers, Davis & Bezuidenhout, 2014). These are internal validity, external validity and pilot studies. Internal validity is where the study possesses no design errors. Internal validity also determines whether the research method used has answered the research question. It is also concerned with the margin of error in results of the study and speaks to any faults with controls. In this study, the research method and the research question are in congruence. The second type of validity is external validity (Du Plooy-Cilliers, Davis & Bezuidenhout, 2014). This type of validity is concerned with the ability to generalise the study's findings from a specific sample to the study's general population. If the study took place in a laboratory, the findings from

the study would need to present outside of this environment. An example of this would be that children would need to react in the same manner towards violent entertainment content in the same manner whether they were in the laboratory or at home. In this study, external validity has been verified by testing if the study is generalisable to the population. This study is generalisable to the population (Du Plooy-Cilliers, Davis & Bezuidenhout, 2014). The final type of validity is known as pilot studies. Here, the researcher has increased the validity and reliability of the study by conducting a feasibility study. This feasibility study serves to test and calibrate the measurement instrument. In these studies, an even smaller sample is drawn, to reduce cost and time requirements (Du Plooy-Cilliers, Davis & Bezuidenhout, 2014). This study has made any possible errors or obstacle known to the researcher and allow modifications to be made accordingly. Here however, due to the nature of desktop research, this has not been necessary as the researcher has worked off data tables and therefore the ability to draw large sample sizes is easier.

Final criteria to which this study has been assessed against are the test of validity. These are the content validity test, face validity test, construct validity test and instrumental validity test. This study satisfies the content validity test as it is representative (Du Plooy-Cilliers, Davis & Bezuidenhout, 2014). It also passes the face validity test as the study is designed as it should be. It also passes the construct validity test as there is agreement between the studies concept and a then measuring device. The study also passes the instrumental validity test as the study is based on principle and laws, and therefore can predict future behaviour (Du Plooy-Cilliers, Davis & Bezuidenhout, 2014).

Validity in this research paper has been verified by examining that there is minimal error in the research design and findings and that the findings are generalisable to the population (Du Plooy-Cilliers, Davis & Bezuidenhout, 2014).

Contribution of Study

Contribution of study can be defined as the impact and contribution knowledge from a research study has on society and the research community. It can also refer to the benefits that mankind and society reaps from this newly discovered knowledge that aids businesses, individuals, families and governments make decisions (Du Plooy-Cilliers, Davis & Bezuidenhout, 2014).

This study will have only minor effect. This is because of two reasons. Firstly, this research is being conducted at an Honours level therefore the insight that can be drawn is low. Also,

because it is an Honours level project, there is no room for obtaining funding for it by the institution that the researcher is studying at. The second reason for the low level of level of contribution is that the researcher is conducting desktop research and is simply applying a different methodology/perspective to the data set.

This study will also contribute to the existing body of knowledge surrounding minimum wage. This will aid entities such as business and governments who use research in this field when drafting legislation and making strategic business decisions. The existing body of knowledge will be built on using deductive methods as this subject has been proposed and explored already, however not very much in the South African context. Therefore it will be building new knowledge in South Africa regarding research on the minimum wage in a local context.

Since this research was conducted using the Critical Realism Paradigm, it aims to be emancipatory. Therefore, this research would aim to emancipate employees, employers and governments as well as dispel myths surrounding the minimum wage.

This research has a strong link to the researcher's degree. Since the researcher's degree is in Commerce, this research will aid in strategic decision making, policy drafting and other decisions that regard the minimum wage and/or its related artefacts.

However, while this field is heavily researched abroad, more research needs to be conducted in South Africa to create relatable and more reliable data. This is due to certain paradigms and methods of conducting work are different in South Africa.

The Data

In this analysis, the quantitative data has been derived from two papers. These papers are *"The Employment and Distributional Effects of Minimum Wage Increases: A Case Study of the State of New York"* by Dr. Joseph J. Sabia and Dr Richard V. Burkhauser 2008. *"Minimum Wages and Employment: A Case Study of the Fast-Food Industry in New Jersey and Pennsylvania"* by David Card and Alan B Krueger 1994.

The first set of data that has been examined is *The Employment and Distributional Effects of Minimum Wage Increases: A Case Study of the State of New York* by Dr. Joseph J. Sabia and Dr Richard V. Burkhauser 2008. This paper was published by the Economic Policy Institute. The Economic Policy Institute is a non-profit think tank with the goal of representing the need of the low and middle-income groups in economic policy discussion (Economic Policy Institute, 2017). This research study was conducted with the purpose of estimating

the effect of the June 2007 minimum wage hike. This minimum wage hike raised the New York State minimum wage from \$7.15 to \$8.25 (an initial increase of \$1.10), and thereafter indexing the minimum wage to inflation. The intention of this measure is to allow those earning the minimum wage to have their earnings keep up with inflation and therefore allow wage to keep up with the cost of living (Fruits, 2009). In this study, Sabia and Burkhauser, (2008) use survey and census data from the New York Current Populations Survey. They use this data to assess many different possible effects of the minimum wage increase. Here Sabia and Burkhauser, (2008), use the 2004 and 2006 data to document the effects of the wage increases from 2004 to 2006 and to also estimate the effects of the minimum wage on the then recently passed minimum wage hike of 2007. The past increase of the New York in 2004-2006 was implemented in three phases. The wage increase was implemented as follows: from \$5.15 to \$6.00 per hour on January 1, 2005; from \$6.00 to \$6.75 on January 1, 2006; and from \$6.75 to \$7.15 on January 1, 2007.

The second set of data that has been analysed is "*Minimum Wages and Employment: A Case Study of the Fast-Food Industry in New Jersey and Pennsylvania*" by David Card and Alan B Krueger. This study has over 2100 Google citations (Villaverde, 2016). According to Villaverde, (2016), the most relevant and useful papers in a field of study usually cross 1000 citations. This paper has been used as a central data point by those researching minimum wage due to the data collection method being in a multiple cross sections format. This study provides valuable data points before a minimum wage increase and after a minimum wage increase. This study is also valuable as it compares the state receiving the wage increase to neighbouring states that have its wage remain the same. Here is where the researchers make extensive use of the difference in difference identification strategy.

Data Analysis

Findings

Sabia and Burkhauser, (2008) draw their primary data from the 2004 and 2006 current population survey. The data that is used is drawn from the New York as well as neighbouring states. This was done for multiple reasons. Firstly, this was done to provide a baseline or control groups against the treatment group before and after treatment. This was done to allow the researcher to see to compare the group receiving the treatment against the group that did not receive the treatment and allow them to measure differences (Labwrite, 2017). In this study, the baseline states are Pennsylvania (PA), Ohio (OH), New Hampshire (NH)

and the treatment group is New York (NY). These states are in close proximity to New York and it can be argued that their economies possess a similar in makeup and behaviour (Sabia and Burkhauser, 2008). It is noteworthy that none of these control states raised their minimum wage during the 2004-2006 timeframe however after the study done by Sabia and Burkhauser, (2008), all three states did raise their minimum wage. According to Sabia and Burkhauser, (2008), these states would follow a similar declining employment trend similar to that of New York.

In the pre-treatment measurement, the control groups (Pennsylvania, Ohio and New Hampshire) receive no increase to their 2004 minimum wage of \$5.15 per hour. This wage stays the same for NY as this is pre-treatment. After the minimum wage increase was enacted on NY in 2006, data was gathered on all the states again using the same source for data- the Current Population Survey.

In their data collection, their primary sample was low skilled workers who did not have a high school diploma or GED (General Educational Diploma) and were between the ages of 16-29. The reason for this being their primary sample is because due to the laws of supply and demand, the least skilled workers will be the first to be affected by an increase in the minimum wage (Sabia and Burkhauser, 2008). There is other significant data that will be explored outside of their primary sample.

New York 2008

The intent of the minimum wage is to assist the working poor and to prevent them from being exploited by their employer/s. The intent behind increasing the minimum wage is to ease the burden on the working poor and provide them with a more income and buying power (Sabia and Burkhauser, 2008). In the case of Sabia and Burkhauser, (2008), it was found that an increase in the minimum wage does raise the wages for less educated workers. This is also a finding shared by Card and Krueger, (1994). However, it can be argued that the wages of those who remain employed do rise, it must be examined if this minimum wage raise has any negative effects on the unemployment rate. Data found in Figure 1 from Sabia and Burkhauser, (2008) show that the employment trend for those working in New York who are between the ages of 16-29 and are unskilled (high school not completed), experienced a decline. New York experienced a downward trend in this demographic starting in 2005 when the increased wage was first introduced and this continues until the last wage increase in 2007 (Sabia and Burkhauser, 2008). It is important to note that the surrounding control

states do not follow the fate of New York. The same age and skill group in the states of Pennsylvania, Ohio and New Hampshire do not experience any significant decrease in employment but in fact experience relatively stable growth. It must be noted however that all these control states do increase their minimum wage in the year of 2007 and all of them experience a downward trend in employment with the exception of New Hampshire. However, this can be attributed to the fact that the minimum wage increases in Pennsylvania and Ohio both increased their minimum wage by \$1 or more per hour while New Hampshire only increased their wage by only \$0.7 (Sabia and Burkhauser, 2008).

Furthermore, it must be noted that these minimum wage increases affect the lowest skilled workers (cite Peter van Doren) (Sabia and Burkhauser, 2008). Upon examination of the graphs denoted as Figure 2, Figure 3 and Figure 4 in Sabia and Burkhauser, (2008), it can be seen that the employment trend amongst people with more skills remain stable or increase. A noteworthy example is the increased employment trend of those who are only possess a high-school diploma and are of the age of 20-29 (Figure 3 of Sabia and Burkhauser, 2008). This is the 2nd least skilled demographic in this data set. This demographic only possesses a small skill increase relative to those without a diploma however, it is enough to allow this demographic to experience sustained growth during the minimum wage increases. Other surveyed demographics such as young college graduates (Figure 2) and older experienced workers (unspecified education) (Figure 4), all experience stability or growth including those in the treatment state. This provides evidence that those earning the minimum wage are unskilled and increases to the minimum wage will cause disemployment as well as increased difficulty finding employment.

Another important statistic is the gap between high school graduates and those without high school diplomas. In Figure 6 of Sabia and Burkhauser, (2008), the employment gap between high school graduates and those without high school diplomas is significant. This gap increases for New York significantly during the period of wage increases while the control states remain stable. Prior to 2004, this gap was showing a gradual decrease (IE: the employment gap between the high school graduates and those without high school diplomas became smaller/less significant). The gap was on a downward trend to lower than most control states. However with the introduction of the wage increases, for those working in New York, the employment gap between those with high school education and those without high school education increased (IE: the employment gap between the high school graduates and those without high school diplomas became larger/more significant). This is

implies that before the minimum wage increase, having a high school education would have been a less determinant factor in finding employment (Sabia and Burkhauser, 2008).

Table 4 of Sabia and Burkhauser, (2008) shows the effects of the minimum wage increase on New York relative to the surrounding control states. In table 4, it can be observed that New York's mean employment fell relative to those in control states amongst 16-29-year olds without a high school diploma during the period of 2004-2006. During this time, other control states with the exception of Ohio, experienced increased mean employment. New York's mean employment had a difference in difference of -0.076 when compared against the average of the control states. IE New York's mean employment decreased in the period between 2004-2006. However, during this period, mean employment in comparison states increased over the period of 2004-2006. This leads to the difference from the years 2004-2006 in both test groups to be subtracted against each other.

This implies the mean employment in New York has reduced by 7.6% in comparison to the average mean employment in the control states for unskilled workers. However, when other variables are excluded, this rate falls to 7.3% in comparison to the surrounding states.

New Jersey 1992

In contrary to the findings of Sabia and Burkhauser, (2008), there is notable data to suggest that an increase in the minimum wage does not cause unemployment among low skilled workers. In the second set of data that has been used in this analysis: the study by Card and Krueger, (1994) show that there was no increase in the unemployment rate. This paper conducts a similar experiment to Sabia and Burkhauser, (2008). However, it must be noted that this paper- Card and Krueger, (1994) was written first. However due to the study's format and experimental design, Sabia and Burkhauser, (2008) chose to replicate it.

Card and Krueger, (1994) sought to document the effects of the minimum wage on the employment levels of New Jersey. In November 1989, The New Jersey Government voted to implement a two-stage wage hike. This law would raise the minimum wage from \$3.35 per hour to \$3.80 per hour in the year of 1990. One year later this would be increased again to \$4.20 per hour. However, a late decision was made by the New Jersey government to add more increases with the new law culminating in a minimum wage of \$5.05 per hour to be effective April 1st, 1992 (Card and Krueger, 1994). This according to Card and Krueger, (1994), made New Jersey's minimum wage the highest in the county. However, the neighbouring state of Pennsylvania did not raise its minimum wage during this time. As part

of the data collection, Card and Krueger, (1994), also collected data on the employment levels in Pennsylvania. This would allow Card and Krueger, (1994), to have a treatment group and control group. This would facilitate the comparison of employment levels between the two states as well as the use of difference in difference calculations.

Card and Krueger, (1994) collected data via telephonic interview between February 15th and March 4th, 1992. These interviews were directed at restaurant owners in the States of New Jersey and Pennsylvania. The restaurants that were used were well known fast food franchises (Burger King, KFC, Roy Rogers, Wendy's). This allowed for a homogenous product and for its demand to be measured over the course of the study. This study differs from Sabia and Burkhauser, (2008) as this is an industry specific study, interviewing restaurant owners on the regions of NJ and Pennsylvania. The first round of interviews was concluded 1 month before the \$5.05 minimum wage was to take effect. The interviews were used to collect relevant data about the restaurant and its employment level. The second wave of interviews were conducted between November 5th and December 31st, 1992. This round of interviews started 7 months after the minimum wage increase took effect.

When examining table 3 of Card and Krueger, (1994), it can be observed that employment in NJ actually increased. This table shows employment by average number of workers in each store. The change can be observed in row 3 of table 3 in Card and Krueger, (1994). There was an average increase of 0.59 workers in New Jersey after the introduction of the \$5.05 minimum wage. This finding is unexpected as it detracts from the anticipated scenario under neoclassical economics. According to Mehmetaj, (2016), under the neo-classical economic model, the average number of employees in New Jersey stores should have decreased. However, Card and Krueger, (1994) have evidence to explain this. As part of the survey, prices in the restaurants were also recorded. A standard meal consisting of a standard menu item (a basic hamburger for Roy Rogers, Burger King and Wendy's or two pieces of chicken at KFC), small order of French Fries and medium soda had the price recorded in both before and after the minimum wage introduction. By comparing row 2, line E, and comparing it to row 3, line F, in Card and Krueger, (1994), it can be observed that the average price for a standard meal in New Jersey increased by \$0.06. This can be compared to Pennsylvania, where the price for a standard meal fell by \$0.01. While the increase is small, it does show that restaurant owners raised prices to help compensate for the increased labour cost. However, the data from Card and Krueger, (1994), does not show sales numbers, which would have provided an insight to effect of higher prices on the

number of meals demanded. However due to the sensitivity and nature of this information, most restaurant owners interviewed would have most likely declined to divulge this information.

However, this study took place during which time the state of New Jersey was in recession. The legislated minimum wage was passed two years prior to this event. Therefore, one explanation on why there was no decrease in employment was because restaurants would have most likely reduced their staff to the minimum required before the first measurement by Card and Krueger, (1994). Card and Krueger, (1994) report that unemployment has already risen significantly prior to their measurement. This would leave restaurants having only the minimum required staff. It could therefore be argued that economic growth from customers substituting restaurant dining and other entertainment with fast food (The Economist, 2010).

Other Data

Recommendation of the Earned Income Tax Credit instead of the minimum wage as it is better targeted. In concluding their paper, Sabia and Burkhauser, (2008), noted that the earned income tax credit would be more beneficial to the working poor. This is due to the nature of the Earned Income Tax Credit- which is only available to those how qualify as poor (IRS.gov, 2017). This differs to the minimum wage which transfers funds away from the business and into the pocket of a young workers in a middle or upper-class family. Evidence from Brookings, (2015), shows that a significant percentage of Earned Income Tax Credit claimants have only a high school diploma or less (Brookings, 2015). This statistics table provided by Brookings, (2015), shows the EITC demographics 112 of the USA's largest counties. The average percentage for claimants with a high school diploma or less, in these counties was 49.3% (Brookings, 2015). 10.8% of Earned Income Tax Credit filers living in New Jersey listed their occupation industry as accommodation/food services industry. 12% of New York filers also listed their employment industry as accommodation/food services. The average percentage of claimants per county with some college degree was significantly lower at 33.9% (Brookings, 2015). The average percentage of Earned Income Tax Credit claimants across the entire United States, who have a high school diploma or less is 50.2%. This data shows that more than 50% of Earned Income Tax Credit Holders had a high school diploma or less. This can be simplified to: on average 5 in 10 claimants of the Earned Income

Tax Credit across the United States will possess a high school diploma or less. These results were achieved using the Average Function in Excel 2016.

Discussion of Emergent Themes

Villaverde

The paper that has been used in the qualitative analysis is a working paper from the University of Pennsylvania by Villaverde, (2016). It is titled "*The Economic Consequences of Labor Market Regulations*" by Jesús Fernández-Villaverde. It is a paper that uses mixed methods to discuss the implications of the minimum wage in the USA with consideration

Villaverde, (2016) wrote the paper in response to the proposed minimum wage hikes in various states to \$15 an hour. Another reason Villaverde wrote the papers was due to the experience he has in his native country of Spain where there was a significant percentage of unemployment resulting from what he perceived to be higher minimum wages. In this paper, Villaverde, (2016) tabulates and assesses data from the US Bureau of Labour Statistics. Villaverde, (2016), uses two sets of data in this analysis. The first set of data is derived from the Business Employment Dynamics (BED) where it reports on the quarterly gross job gains and job losses since 1992. The second set of data within this paper is derived from Job Openings and Labor Turnover Survey (JOLTS) [sic] (Villaverde, 2016). This measures hiring's, job openings and separations. By using these two sets of data, Villaverde, (2016), hoped to examine job flows from the BED set of data. These flows are the opening and expansion of existing businesses as well as job destruction resulting from closing businesses, and job separation. Separation is defined as a term used to describe a number of different reasons for a worker being fired. These reasons include but are not limited to retirement, job abandonment, resignation among other reasons (Society for Human Resource Managers, 2014).

In Villaverde, (2016), a theme can be identified, in most research studies concerning the minimum wage such as, (Card and Krueger, 1994 and Sabia and Burkhauser, 2008 and Sabia, 2012), have been conducted on minimum wage increases that are reasonable in size. These increases that have been studied have never exceeded 20%. IE: minimum wage hikes that were passed never exceeded an increase of 20%. This is important as there has been very little research or simulation of increases to the minimum wage that exceed 20%. This is because there has not been a need until now. This presents an issue as in the USA, there is strong social and political powers seeking to increase the minimum wage. While

most of these activists are for state increases, there are a number of intuitions and individuals demanding a federal increase to the minimum wage to \$15 per hour. The current federal minimum wage is \$7.25. A \$15 minimum wage would mean an increase of 106% from the current federal minimum. Politicians such as 2016 Democratic Party Presidential Candidates; Bernie Sanders and Martin O'Malley voiced their support of the \$15 minimum wage (Reuters, 2015). Presidential Candidate Hillary Clinton later changed her position to a \$15 per hour minimum wage as well. According to Krueger, (2015) as cited by Villaverde, (2016), *"a \$15-an-hour national minimum wage would put us in uncharted waters, and risk undesirable and unintended consequences."*

This

"The general debate on the minimum wage", "The impacts of a minimum wage", "The associated benefits and disadvantages of the minimum wage" and "Alternatives to a minimum wage"

Criticism of Data

Sabia and Burkhauser (2008) should have been expanded their study to an earlier start date and a later end date. IE an earlier collection of the survey data in an effort to circumvent those employers who may pre-emptively fire staff or replace staff or even automate. A later collection point might would have been beneficial as some restaurants may only make the decision to downsize staff after assessing their financial records and financial performance. These restaurant owners might also use "putty clay" technologies. This is where the reaction to a minimum wage increase may not be immediate obvious or quantifiable.

Another criticism of the data is the lack of identification and lack of emphasis of possible variables that could affect the outcome of the study. An example of this is Card and Krueger, (1994) only mentioned that New Jersey had experienced a recession twice in their entire paper. This fact should be better emphasised as this paper is often used as evidence to show that there are no negative effects of the minimum wage. This fact should be further emphasised.

Areas for further research

The fight for 15

Evidence presented shows that those engaging minimum wage debate occurring in USA may be uninformed. As concluded by Villaverde, (2016), past research has shown a mixture

of outcomes resulting from small increases in the minimum wage. Villaverde, (2016) continues to state that there has been no study done that will estimate the impact of the proposed wage increase under the fight for \$15- an increase which will almost double the current state minimum. This could place the US economy and labour market in turmoil.

Fight for R20

Locally, steps have been made towards the implementation of a national minimum wage. This could have negative effects and it has elicited criticisms from the Minister of Labour (Fin24, 2015). Incumbent Labour Minister Mildred Olifant made objections to the proposed minimum wage demands from COSATU (Congress of South African Trade Unions), fearing that it could lead to retrenchments and high unemployment (Nhlabathi, 2015). However, in 2017, Deputy President Cyril Ramaphosa signed into law, a minimum wage of R20 per hour (Mail & Guardian, 2017). This law will take effect from the 1st of May 2018. In a number of ways this law is more restrictive than those that have taken place in the US. According to le Cordeur, (2017), business's will not be able to reduce the hours of work for their employees. And this law is in many ways more restrictive than its US counter parts. This law should also be assessed by local researchers in order to simulate the effects of a R20 national minimum wage, as a national minimum wage currently does not exist. South African minimum wages are determined on an industry or sectoral level.

Minimum wage indexing

According to findings by Fruits, (2009), no significant impact was found when indexing the minimum wage to inflation. This measure could negate the need for minimum wage increases as the wage of a worker is matched to inflation. This would allow minimum wage workers to keep up with the rising cost of living while not increasing the labour cost for employers significantly. This area should be explored in greater depth and breadth.

Conclusion

The researcher finds that there is insufficient evidence to indicate that increases to the minimum wage causes unemployment. This is due to conflicting data. The first paper that was explored suggests that the minimum wage can decrease the employment level of unskilled workers by a notable percentage (Sabia and Burkhauser, 2008). However older research suggests that this may not be true for all industries or all areas as some consumers may be willing to accept higher pricing that business owners pass on to them (Card and Krueger, 1994). It is also to be noted that a \$15 minimum wage in the US and a R20

minimum wage locally have not been sufficiently studied and could have devastating consequences. However, it must be noted that both sets of data started their measurements very close to the implementation date of the higher minimum wage and both sets of data concluded their measurements too soon after the wage hike was implemented. Future studies could learn from this and broaden their time scope. However, it must be noted that this study has also identified two ways to assist the unskilled working class. Local legislators could implement wage indexing to allow the poor to keep up with the rising cost of living. The second manner that local government could achieve this would be the adoption of a similar model to the US Earned Income Tax Credit. This would allow highly targeted relief for the poor. The researcher also wishes to convey the importance of research in the legislature as labour reform without making use of empirical data could harm the very people it is trying to help.

Reflections

The researcher initially hoped to find a set of data from South Africa that showed employment statistics before a sectoral minimum wage increase on those who are classified as unskilled and the employment statistics after the minimum wage increase on this group of people. Here the researcher would have hoped to find data sets or papers by local researchers however little to no evidence exists in this area or format. This is why the researcher has made use of extensive sources from the USA.

The researcher was also determined to do a quantitative study. However, due to the age of the data found, a mixed methods approach had to take place. The researcher was also originally going to use hypothesis testing but due to the nature of data found, this was not possible and it was not needed.

Ethical considerations and limitations of study

Ethical Considerations

Ethical considerations can be defined as the professional code of conduct that researchers have to abide by when conducting research studies. This code of conduct is concerned with protecting the data as well as ensuring the researcher does not resort to falsifying information, using bias or otherwise intentionally skewing their results (Du Plooy-Cilliers, Davis & Bezuidenhout, 2014).

Ethics is important in research as it discourages unscrupulous activities on part of the researcher. This study has been concerned with the possible falsifying of information, distortion of results, allowing bias in research, misusing information as well as using in appropriate research methods.

It would be unethical for the researcher of this study to make use of the falsification of information. Here transparency measures have been put in place such as reporting to the research co-ordinator, allowing other researchers/assistants on the team to scrutinize the data.

Distorting results is another consideration that needs to be taken into account. Here a researcher may seek to distort results to obtain more funding, or use statistics and figure that are out of context in order to push their research topic forward.

Bias is a very prominent and sometimes even unavoidable dimension of ethics in research. Here a researcher's personal attitudes and beliefs may skew the data. Researchers can do this knowingly or unknowingly. It is virtually impossible to find research that is completely free of bias. Bias may be present when picking a sample, unit of analysis, choosing a data set and many other places. When bias is present, it will usually skew the data in the researchers favour.

Misusing information can be a big issue in research. Here researchers can sometimes sell sensitive information gathered in surveys, questionnaires and data tables to governments and corporations. In this study, the researcher has not sold or given any study or respondent information to any party, government, individual or corporation.

For the researcher of this task to ensure ethics they have drawn up a personal code of conduct and adhere to it. A partnership has also been formed with other researchers in order to get second opinions etc. on grey areas. The researcher has also sought to treat others in the same manner as they would want to be treated.

Ethical Considerations Checklist

The layout of this rationale is informed by the format described by Hussey and Hussey, (2000)

The research process has not harmed the participant or those about whom the information is gathered as this study is secondary research. This is because the data being collected is secondary research and is achieved through the study of already collected statistics. The

findings of this research has not likely not cause harm to others not involved in the research as it is secondary research. Also, there is no violation of accepted research practice in conducting the research, data analysis and conclusion formulation as this study is secondary research. Community standards of conduct has not be violated due to the nature of the data collected. However, the researcher has endeavoured to verify that that participants from the statistics tables and data sets were interviewed/surveyed/studied in and ethically sound manner.

Limitations of study

Limitations in research study can be defined as constraints or limits in a research study that are out of the researchers control including but not limited to time, funding, human resources, regulatory conditions and computation power of data analysis instruments such as computer. These limitations have affected the scope of research (Du Plooy-Cilliers, Davis & Bezuidenhout, 2014).

The primary limitations in this study will be further details in the information as the data is secondary research. If the researcher has a question about the data, it may be hard to ask the collector of the data questions (Du Plooy-Cilliers, Davis & Bezuidenhout, 2014).

Government policy may be another limitation. The government may place certain restrictions and classifications on certain statistics that prevent them from entering the public space. EG: certain information about employment levels may be restricted. Thus, when a bureau or entity that has the required statistics for this study, they may not be legally allowed to divulge them. There is also a possibility of only giving data that that is not as sensitive or declassified. This data could be old and out of date. (Du Plooy-Cilliers, Davis & Bezuidenhout, 2014).

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Appendices