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Title: Global Trade And Market

**Name of Author** 

Name of University Deakin
Country of Study Australia
Major Business
Degree Bachelor

**Course Title** Global Trade And Market

**Type of Document** Assignment

**Year** 2018

# Deakin University MPE711 Global Trade and Market Group 26

**Research Assignment** 

**Words Count: 2000 words** 

Does An Increase in the Minimum Wage Rate of Australian Workers Affect The Australian Average Household Income?

#### Abstract

Our group hypothesise that an increase in the average minimum wage rate in Australia over the years has a positive influence on the average household income. Our alternative hypothesis is that an increase in the minimum wage rate has negative ramifications on the average weekly household income in Australia. The statistical data and facts used for our assignment are mostly from the Australian Bureau of Statistics and other very credible sources. After our analysis, we have reached the conclusion that minimum wage rate has a positive linear relationship with Average Weekly Household Income and GDP of Australia. Additionally since the mid-1990s, nominal increases in minimum wages appear to have an insignificant influence on employment or unemployment levels. We can conclude from the data that from 2008-2016, real minimum wages rose by nearly 2% while employment increased by 12%. Therefore, increasing minimum wage does not have disemployment effects. However, there are some limitations of our research. Notably, there was limited data available concerning Australia's Gross Household Income and spending.

# 1. Introduction

Australia counts as the second country in the world to embrace a minimum wage, with the initial nationally authorized efforts going as far back to 1907. Fair Work Commission is the responsible body, which regulates and sets the minimum wage rate and holds an annual review to determine its suitability.

The hypothesis of this paper is that an increase in the average minimum wage rate in Australia over the years increases the average weekly household income. There are several factors to support the hypothesis. Firstly, due to an increase in minimum wage rate, it would result in an overall economic growth, thus there is a transfer of wealth from business sector to low-paid workers, and therefore the employee can share from this benefit. Secondly, the lower income level worker will likely be under less financial constraints with a higher income and will spend more to improve or maintain their living standards. The age-old concern over increasing minimum wage and its consequent negative implications on businesses inconsequential, as a stronger consumer base will also support the small and medium businesses to enhance and sustain their sales.

On the other hand, the alternative hypothesis states that by increasing minimum wage, the average household income decreases. The alternative hypothesis can be true because by increasing minimum wage we would add additional financial burden on employers who would in turn cut jobs and this would have the overall effect of decreasing average household income.

# 2. Literature Review

# • Null Hypothesis:

Increase in minimum wage increases Average household Income

Evidence from overseas supports this view.

The main aim of an increase in minimum wage rate is to increase the wage rate who receive the lowest salary considering the fact that most workers would acquire an income greater than the minimum at any rate. The influence on the average wage is minor and therefore the influence on employment and unemployment is small. This theoretical argument is further reinforced by global empirical studies and evidence, which elucidates that the effects of minimum wages on total employment and unemployment are small (Brown, Gilroy and Kronen 1982).

David Card and Alan Krueger did a renowned study in 1990 whereby they compared statistical data related to fast food employment in two states, New Jersey and Pennsylvania, whereby minimum wage increased in one state while the other one did not increase it. They concluded that there was not a substantial effect on workers employed.

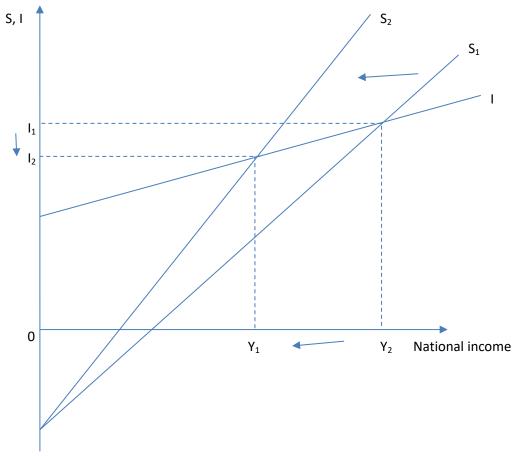
Another ground-breaking paper studied US restaurant employment in 288 different pairs of adjacent counties that had different minimum wages. They established that minimum wages did increase wage rate but they do not detrimentally effect employment.

There is a similar trend in the United Kingdom. When minimum wage first came about in 1999, the British government were wary about any harmful effects that the likes of Hockey and ACCI had cautioned them. However, they never came to be. "The UK's minimum wage is now 75% higher than it was when it was introduced, while the UK CPI has risen by just 37% over the same period". 'The evidence is clear: increasing the minimum wage doesn't cost jobs' (The Guardian 2014)

Businesses rely on consumer spending, and consumer spending depends on the wages. The minimum wage increases the worker income. At current minimum wage \$18.29 an hour, the minimum wage comes to \$36.108 a year for full-time work.

In equilibrium, total income must equal total output. According to paradox of thrift theory, more saving means less nation income. From the table x, line S represent saving, line I represents Investment and Y represents national income (Haight, A 2015).

If saving increases, the saving line will shift from  $S_1$  to  $S_2$ , the national income will decrease from  $Y_1$  to  $Y_2$ . That means more saving will lead to damage the economic. Eventually the



population's total saving will also decline because of lower incomes and a weaker economy.

To measure the effect of minimum wage, the report will analyse the change between expenditure and non-skilled worker's income. Difference in difference will be the suitable method to analysis the effect from the minimum wage was established. Thus, this would have the result that when minimum wage increases, it would in turn increase the average household income and spending.

# • Alternative Hypothesis:

Increase in minimum wage does not increase Average household Income

#### Reason:

Historically, people have been wary about the negative effects of increasing minimum wage rate as the employers would have to shoulder the extra financial burden, and consequently result in cutting jobs and/or the number of hours would in turn force them to decrease the number of people they employ or cut the amount of hours their existing employees work. Increased rate of unemployment would lead to an increase in poverty because this will adversely affect low income and unskilled workers. Due to this disemployment effect and increase in poverty level, average household income would decrease.

"In classical terms minimum wages can be considered in terms of the demand and supply for labour, both of which are considered to be elastic. That is if the price of labour increases the supply of labour will increase, but demand will fall. Therefore, unemployment results"

In Figure 20 the labour market is in equilibrium at the point where wages are equal to  $W_e$  and employment is  $E_e$ . If however the minimum wage is set above this point – say  $W_f$ , then the demand for labour will fall to  $E_{df}$ , with unemployment equal to the gap between  $E_{df}$  and  $E_{sf}$  – the level of labour that people are willing to supply at this higher price.

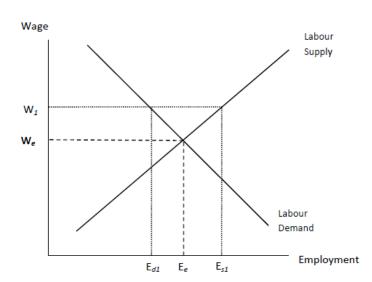


Figure 20. The competitive labour market

A famous economist, Andrew Leigh, conducted a study whereby he examined the consequences of an increase in minimum wage rate in Australia relative to employment in the

rest of Australia. In the end he concluded that there was a steady negative relationship between the two (i.e., when wage was increased, the demand for labour decreased)

"There is considerable empirical research on the labour market in Australia and the effect of rises in average wages on employment (Lewis and Seltzer 1996). This data elucidates, "A 10 per cent increase in average wages reduces employment by about 8 per cent" Dr William Coleman & Dr Alex Robson (2008)

# 3. Analysis

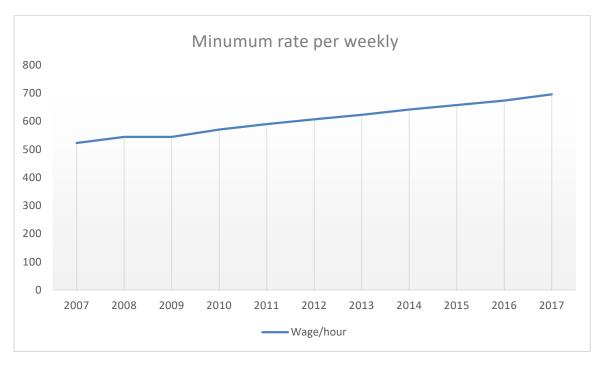
To test our hypothesis, we study the Gross Household Income in Australia from 1994–95 to 2013–14(Figure 1). We then compare this data with the Weekly Minimum Wage rate in Australia. From the data, we can conclude that both increase in minimum wage rate and average household income have a positive linear relationship.

Figure 1.

Australian Bureau of Statistics Australian Bu														
6523.0 Household Income and V	/ealth, Au	stralia, 201	3–14											
Released at 11:30 am (CANBERRA TIME) 16 December 2015														
Table 1.2 GROSS HOUSEHOLD INCOM	E, Australia	, 1994–95 to 2	2013-14											
		1994–95	1995–96	1996–97	1997–98	1999–2000	2000-01	2002-03	2003-04(a)	2005-06(a)	2007-08(a)	2009-10(a)	2011–12(a)	2013-14(a
					E	STIMATES								
Mean income per week(b)														
Lowest quintile	\$	253	270	273	282	286	282	292	336	351	388	399	413	43
Second quintile	\$	604	601	623	626	642	638	671	717	778	887	862	900	922
Third quintile	\$	1,037	1,024	1,065	1,068	1,123	1,113	1,149	1,224	1,319	1,503	1,464	1,523	1,552
Fourth quintile	\$	1,604	1,593	1,623	1,659	1,746	1,701	1,757	1,860	2,017	2,273	2,249	2,352	2,403
Highest quintile	\$	2,954	2,876	2,951	3,096	3,311	3,195	3,271	3,495	3,838	4,583	4,366	4,512	5,002
All persons	\$	1,290	1,273	1,307	1,346	1,422	1,386	1,428	1,526	1,660	1,927	1,868	1,940	2,063
Adjusted lowest income quintile(c)	S	312	315	333	325	329	328	335	375	391	429	443	460	484

Source: ABS (2015)

Figure 2.



Source: Fair Pay Commission (2017)

We do a comparison with the lowest quintile of household's income per week and the average of household income.

Table: comparison of the House Income Growth Ratio between lowest quintile and average, different period:

Year	Average	Lowest Quintile	Ratio(Lowest
			Quintile/Average)
1994-	(1660-	(351-	40.316%/28.682%=1.4056
2007	1290)/1290=28.682%	253)/253=40.316%	
2007-	(2063-	(435-	12.113%/6.592%=1.8375
2014	1927)/1927=6.592%	388)/388=12.113%	
(minimum			
wage)			

From the table. There is significant evidence shows the minimum wage can increase the income growth to lower income level worker. In 1994 and 2017. The Lowest quintile of household income increased 40.316% and the average household income increased 28.682%. The ratio of them was 1.4056. In 2007 and 2014, the lowest quintile of household income increased 12.113% and the average of household income increased 6.592%, the ratio was 1.837 which is large than before. The lower income level works are taking benefit by minimum wage.

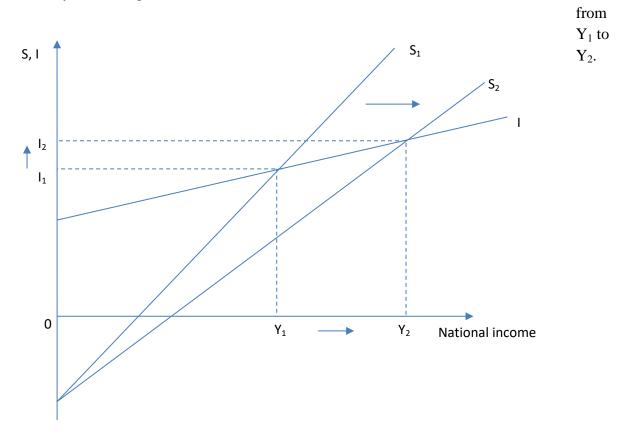
Chain	Average(1996-2006)	Average(2007-2016)	Change%	Change in % higher/lower than expenditure
Necessary Expenditure				
Food	16775	22520	0.34249	Similar
Clothing	5044	8149	0.615504	Higher
House Bill	38763	51531	0.329379	Lower
Rent for houseing	32403	43936	0.355915	Similar
Household equipment	6898	10096	0.46355	Higher
Health	8030	13115	0.633121	Higher
Transport	16243	22570	0.38952	Similar
Transport service	4154	7318	0.761753	Higher
Communications	2502	4536	0.813359	Higher
Education	7430	9753	0.312753	Lower
Uneccessary Expenditure				
Alcoholic and tobacco	9044	9162	0.012961	Lower
Operation of vehicles	9230	11295	0.223685	Lower
Recreational and cultural service	10004	11491	0.148579	Lower
Net losses from gambling	5727	5977	0.043599	Lower
Hotels, cafés restaurants	11980	15074	0.258248	Lower
All expenditure	160458	224244	0.397524	

Source: ABS (2017)

From the Table, there is significant evidence shows from 2007 to 2016, all of the necessary expenditures changes in percentage in similar or higher than expenditure. Clothing, Household equipment, Health, Transport service and Communications have higher change than expenditure. Education spending and House bill are control variables, because they has government support and fixed cost factors representatively, so their change in percentage is lower than expenditure. Overall, the necessary expenditure push the overall economic growth.

Moreover, all of the unnecessary expenditures are lower than expenditure, which means Australian resident spend small amount on unnecessary expenditures while economy growing.

Normally, lower income level worker tends to spend most of their income, because their priority is to improve their living standard rather than saving money. Minimum wage will shift the economic benefit from employers to employees, especially lower income worker. Their income increase will lead to more consumption in the market. The policy will shift the economic benefit to lower income level workers, which means there is less saving in the economy, the saving line will shift down from  $S_1$  to  $S_2$ , and the national income will increase



To stimulate consumption, it is possible to allocate more money to low-income workers who will pay for their wages, thereby increasing the flow of money because they will spend more

money. Low-income workers would like to spend their money rather than save it in order to improve their living standard. Minimum wage enhance workers' purchasing power, and businesses will have stronger customer base. Therefore, a higher minimum wage will increase sales at local businesses.

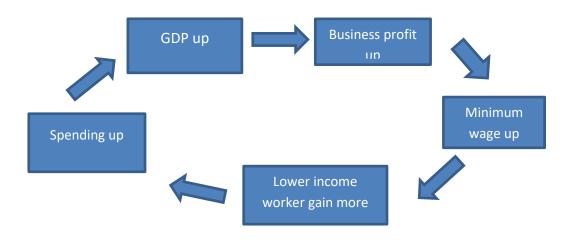
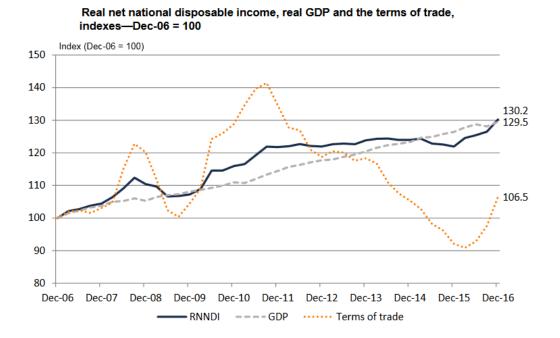


Figure 3.



Source: ABS, Australian National Accounts: National Income, Expenditure and Product, Dec 2016, Catalogue No. 5206.0.

Figure 4.

# Financial stress experienced by all employee households: both partners, lone parent, or lone person report stress

	2011	2012	2013	2014	2015	
Financial stress indicators	(%)	(%)	(%)	(%)	(%)	
Unable to raise \$3000 in a week for something important	5.9	5.3	4.5	5.0	5.1	
Could not pay electricity, gas or telephone bills on time	9.0	8.5	7.8	8.2	8.1	
Could not pay the mortgage or rent on time	4.7	3.8	3.6	3.5	3.4	
Pawned or sold something	2.4	1.9	2.1	2.0	2.3	
Went without meals	1.9	1.3	1.5	1.7	1.7	
Could not afford to heat home	2.0	1.6	1.1	1.3	1.7	
Sought assistance from welfare/community organisation	1.5	1.2	1.0	1.1	1.0	
Sought financial help from friends or family	8.2	7.8	6.8	7.7	7.2	
Any stress	17.5	16.4	14.9	15.9	15.8	
Low stress (1–2)	12.4	12.5	11.3	12.0	12.4	
Moderate stress (3-4)	3.8	3.0	2.7	3.1	2.4	
High stress (5 or more incidences of financial stress)	1.2	0.9	0.8	0.8	1.0	
Observations	4780	4732	4703	4795	4769	

Note: Employee households are those households whose main source of income is from wages or salary. Both partners in a couple family household, the lone parent in a lone parent household and the lone person of a lone person household must report financial stress for that particular household to be considered as such. Observations from multi-family households, other related family households and group households are excluded.

Source: Household, Income and Labour Dynamics in Australia Survey, Waves 11-15.

From the following data it can be deciphered that over the years as the minimum wage has been steadily growing, there has been less financial stress experienced by all employee households. As the minimum wage increases, the average worker would have more household income and therefore would be under less financial stress.

### Elasticity of labour demand:

Price elasticity of demand for labour is less than the price elasticity of the labour supply, which means the elasticity of demand for labour is less than 1.

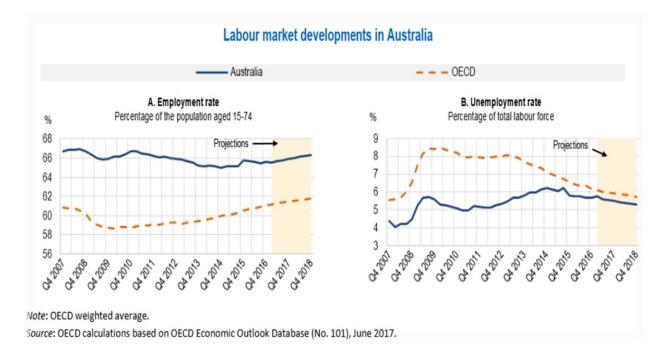
Elasticity of demand for labour = % change in demand for labour/% change in wage rate

The table shows the increasing wage leads to employment rate down, the employment rate will decrease from E1 to E2, because the valid minimum wage is higher than the equilibrium wage, the wage will increase from W1 to W2. The total surplus of labour will be larger than before because of the inelastic demand of labour.

From the minimum wage was legislated, the unemployment wage do not have significant increase and recently have a sign will decrease in near future (OECD, 2017).

## **Control Variable: Unemployment Rate**

Figure 5.



In theory, the effect of an increase in minimum wage would affect both supply and demand of labour, i.e. when minimum wage increases the demand for labour decreases and supply for labour increases. However, in reality, an increase in minimum wage has an insignificant effect on the employment and unemployment rate. The increase of unemployment rate in 2008 was a result of International Financial Crisis and is therefore an isolated event.

# 4. Conclusion

This report discusses the impact of increasing minimum wage rate of workers in Australia on the average household income. This report collects data from the number of in Australia, and finds that there is a positive correlation between the average worker's household income and their wage rates.

Australia is a country with an overall stable economic and labour performance and an increase in minimum wage empowers the worker with more income and less financial constraints, therefore when the minimum wage rises, the average household income also increases.

The alternative hypothesis states the opposite i.e. that an increase in minimum wage would decrease average household income as increasing minimum wage can have negative employment effects. However, since most affected group is the unskilled and low-income sector to the change in minimum wage, therefore the overall effect on total employment and unemployment rate is insignificant. Based on this we reject our alternative hypothesis.

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