THE TREASURY
Kaitohutohu Kaupapa Rawa

16 January 2018

Thank you for your Official Information Act request, received on 13 November 2017. You requested the following:

"Under section 12 of the Official Information Act 1982, I request a copy of all information prepared since 1 September 2017 regarding the government's policy to increase the minimum wage. Please take this request to include all emails, memos, briefings, aide memoires, meeting minutes, drafts, and Cabinet papers."

On 7 December, we extended the time limit for deciding on your request by an additional 10 working days.

Information Being Released

Please find enclosed the following documents:

Item	Date	Document Description	Decision
1.	15 September 2017	Internal note about pre-election commitment relating to the minimum wage	Release in part
2.	25-30 October 2017	Internal email and attachment about the impact of minimum wage changes	Release in part
3.	6-7 November 2017	Emails and attachments about the impact of minimum wage changes (the attachment containing data from Statistics NZ is out of scope)	Release in part
4.	7 November 2017	Excerpts from a Treasury report	Release in part
5.	7 November 2017	Internal analysis of the impacts of minimum wage changes	Release in full
6.	9 November 2017	Internal analysis of the impacts of minimum wage changes	Release in full
7.	14 December 2017	Treasury report on the minimum wage	Release in part

I have decided to release the relevant parts of the documents listed above, subject to information being withheld under one or more of the following sections of the Official Information Act, as applicable:

- Advice still under consideration, section 9(2)(f)(iv) – to maintain the current constitutional conventions protecting the confidentiality of advice tendered by Ministers and officials.

- Certain sensitive advice, under section 9(2)(g)(i) – to maintain the effective conduct of public affairs through the free and frank expression of opinions.

- Contact details of officials, under sections 9(2)(a) and 9(2)(k) – to protect the privacy of natural persons or to prevent the disclosure or use of official information for improper gain or improper advantage.

Some information has been deleted because it is not covered by the scope of your request. This is because the documents include matters outside your specific request.

Contextual Information

I note that items 2, 3, 5 and 6 contain draft forecasting analysis, and some of the forecasting methodology and outlined impacts were refined before the forecasts were finalised. In particular, item 2 (page 6) describes the employment impact of the wage change if the impact was entirely on unemployment; later analysis adopted the conventional assumption that the impact would be split between hours worked and unemployment. Analysis in item 3 (page 15) largely assumes a price elasticity of demand for hours of -0.4; the final forecasts used an elasticity of -0.3 consistent with relevant literature and economic conditions.

I also note that within the forecast period, some of the impacts of the minimum wage changes will be offset by other factors, so some of the labour demand impacts set out in the documents may be somewhat mitigated by other factors. A range of other policy proposals are also likely to impact on the labour market and wider economy, and forecasts have treated these as risks until further policy detail is available. For the final treatment of minimum wages in the forecasts, please see the Half Year Economic and Fiscal Update published on Treasury's website.

Clarifications

In item 2, the incomplete sentence on page 7 appears in the original. In item 3, the email of 7 November contains two transcription errors: the wage bill change should refer to billions, not millions, and the 'youth rate' should refer to 80%, not 50%. Pages 34-36 and 64-65 are blank in the original document.

Information Publicly Available

The following information is also covered by your request and is publicly available on the Treasury website:

Item	Date	Document Description	Website Address
8.	November 2017	Forecasting analysis for the Half Year Economic and Fiscal Update	www.treasury.govt.nz

Accordingly, I have refused your request for the documents listed in the above table under section 18(d) of the Official Information Act – the information requested is publicly available.

In making my decision, I have considered the public interest considerations in section 9(1) of the Official Information Act.

Please note that this letter (with your personal details removed) and enclosed documents may be published on the Treasury website.

This reply addresses the information you requested. You have the right to ask the Ombudsman to investigate and review my decision.

Yours sincerely

Andrew Rutledge
Manager, Labour Market, Immigration and Tertiary Education

Information for Release
OIA 20170365

Pages 1-8 not relevant to request

Minimum wage

What is the promise (preferably in their words)?

- Increasing the minimum wage to $16.50 an hour, and
- Deleted - Not Relevant to Request

http://www.labour.org.nz/workplace_relations_policy

Any different options for achieving their goal, and what are their strengths and weaknesses? What are the policy concerns/issues that need to be considered?

Across the labour market, tax and welfare systems the government has many options for raising low incomes, and it could be valuable to consider these alongside minimum wage changes. The government always faces the "iron triangle" of trade-offs between cost, income levels, and work incentives.

The table below considers these trade-offs across different options for lifting incomes at the bottom. It highlights that the minimum wage changes will have greatest impact on young and part-time workers.

Research suggests the minimum wage may not have a direct effect on decreasing poverty as people below the poverty line often live in non-working households. Many minimum wage workers who are paid the minimum wage live in houses that collectively earn above the poverty line and the minimum wage.[4] Tax credits and welfare support tend to be better at reaching those in poverty.

Over the longer term, improving education skills is the most effective way of lifting income.

Option		Who it targets	Does it reach deprived children?	Does it reduce work incentives?	Fiscal costs
Labour market	Raise minimum wages (including Living wage proposals)	Disproportionately 16-24 year olds & part-time workers	Not effective	No	Low

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[4] http://www.treasury.govt.nz/publications/informationreleases/ris/pdfs/ris-mbie-mwrw-feb17.pdf

What are the policy concerns/issues that need to be considered?

What are the policy concerns/issues that need to be considered?

As noted in the appendix below, under current economic conditions the proposed commitments are likely to lift the wages of those in the lowest paid work while not having significant effects on employment or inflation (while there may be education participation impacts, the policy response lies elsewhere).

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Clarity of fiscal implications – is this manageable in baselines? Through reprioritisation? Or will it involve new money?

Any change to minimum wage will have some additional costs (likely to be the Ministries of Health, Social Development and Education, and the Accident Compensation Corporation from higher wage costs for their employees and service providers). [any updated MBIE analysis in their advice?]

Are there logistic/practical issues (e.g. agency preparedness; data issues; etc)

MBIE is well prepared to implement the policy.

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Practical advice on how to take this forward?

MBIE would be the responsible agency. Implementation would likely be as follows:
- *increasing the minimum wage to $16.50 per hour:* can be implemented by an Order in Council
- Deleted - Not Relevant to Request

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Appendix: Potential impacts of minimum wage changes

Raising to $16.50
Based on, this would be a minimum wage of about 68% of the median wage (based on median hourly earnings from wages and salaries in June 2017; and updated median would likely show a different result).

For our understanding of the minimum wage impacts generally, see the next section.

In terms of the impact of a $16.50 minimum wage, MBIE modelled impacts at this level in November 2016 (which is a fairly unreliable guide as conditions affecting the estimates have changed). That modelling suggested a $16.50 minimum wage would:
- affect 212,000 people
- restrain employment growth by about 7,000 workers
- have an estimated inflationary impact/GDP of 0.1%, and
- have an estimated fiscal cost of $87.10m (high level estimate based on the additional costs to the Ministries of Health, Social Development and Education, and the Accident Compensation Corporation from higher wage costs for their employees and service providers). [5]

Note that the change would also have indirect impacts, but these are hard to assess and are not included.

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[5] http://www.treasury.govt.nz/publications/informationreleases/ris/pdfs/ris-mbie-mwrw-feb17.pdf

Deleted - Not Relevant to Request

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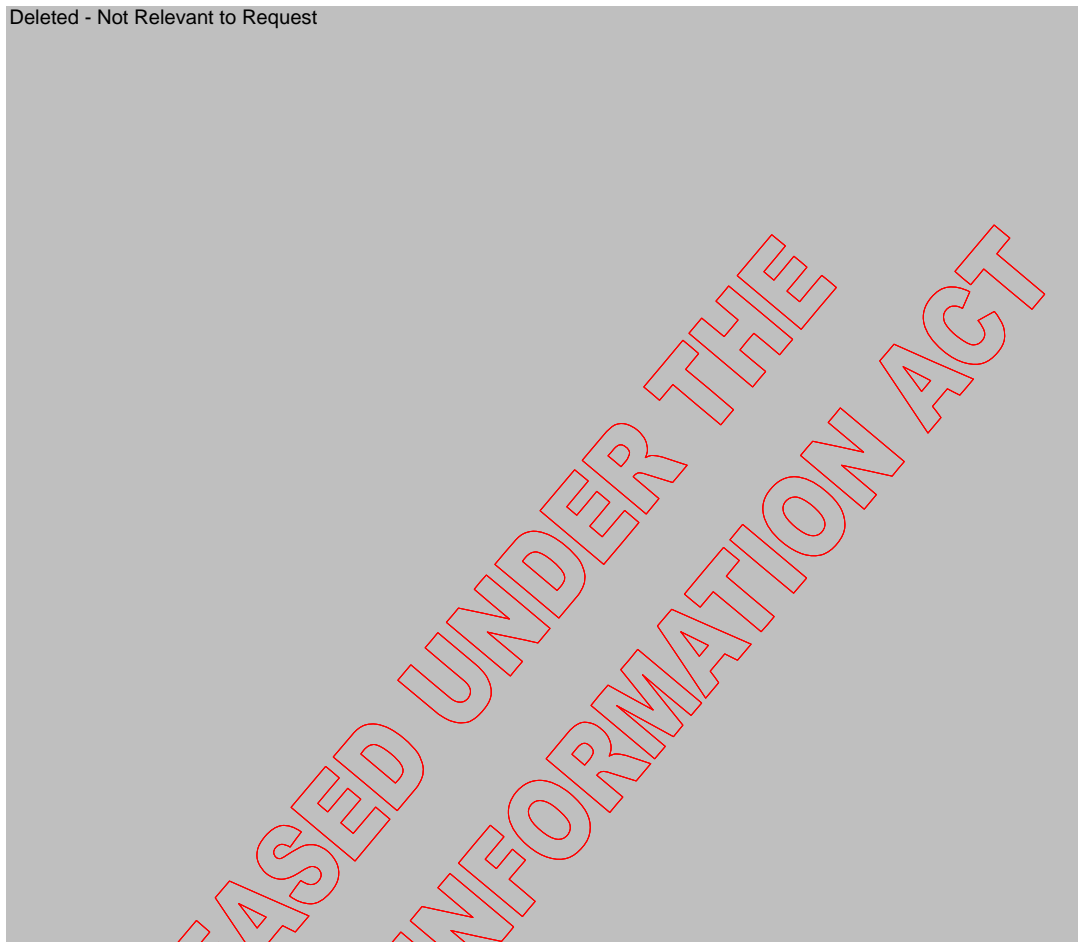
Remainder of document not relevant to request

Deleted - Not Relevant to Request

IN-CONFIDENCE

From:	Phillip Mellor [TSY]
Sent:	Monday, 30 October 2017 3:46:47 PM
To:	Andrew Rutledge [TSY];Jennie Marjoribanks [TSY];Richard Baird [TSY]
Cc:	Yvonne Deneys [TSY]
Subject:	FW: Minimum wage and labour demand/unemployment

Hi guys,

Thanks for your time just now. See below the link to the OBR analysis. Lucky for us Katy who worked on it is currently seconded here.

Cheers

Phillip Mellor | Senior Analyst | **The Treasury**
s9(2)(k)   Phillip.Mellor@treasury.govt.nz

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From: Katy Simpson [TSY]
Sent: Thursday, 26 October 2017 3:08 p.m.
To: Phillip Mellor [TSY] <Phillip.Mellor@treasury.govt.nz>
Cc: Peter Gardiner [TSY] <Peter.Gardiner@treasury.govt.nz>; Peter Mawson [TSY] <Peter.Mawson@treasury.govt.nz>
Subject: RE: Minimum wage and labour demand/unemployment

Hi Phillip

In case of interest, the OBR had to do some similar work in July 2015 when the UK government introduced the 'National Living Wage' – which introduced increases in the national minimum wage that were significantly bigger than had been done previously.

Our approach is explained in Annex B of this document:
http://budgetresponsibility.org.uk/docs/dlm_uploads/July-2015-EFO-234224.pdf

I am very happy to talk you through it if you're interested. I would summarise our approach as:
- Estimated how many people would be affected directly (i.e. how many people currently paid below new NLW) and how much of a spill over up the wage distribution (assumed up to the 25th percentile)
- Estimated what that would mean for the increase in cost be for businesses (how many people affected * how much affected)
- Estimated the elasticity of demand for labour (assumed -0.4)
- Assumed a split of reduced labour demand between heads and hours (we assumed a 50/50 split) to work out effect on NAIRU and trend average hours

- Worked out the compositional shift do to labour productivity e.g. losing X many workers with Y productivity level will arithmetically increase productivity by Z amount, using wages as a proxy for productivity ('batting average' effect)
- Worked out price effects – assumed around half the increase in unit labour costs were passed through to prices

Thanks

Katy
Katy Simpson | Senior Analyst | **Macroeconomic & Fiscal Policy**

From: Phillip Mellor [TSY]
Sent: Wednesday, 25 October 2017 3:12 p.m.
To: @Forecasting <Forecasting@treasury.govt.nz>
Subject: FW: Minimum wage and labour demand/unemployment

Some useful info from the labour market team below on minimum wage effects. Searching through I found four different estimates to make an estimate of impact from. I've taken the percentage change to be 12.7% in March 2021 i.e. difference between $20 proposed vs an assumed counterfactual of $17.75 (continuation of recent 50c increases or grow by QES – they come out the same). Assuming the decrease in employment goes into unemployment (i.e. no change in participation rate and labour force) then the impact on unemployment is 0.4-0.9%. This also assumes all the impact is on unemployment but I gather that the conventional wisdom is the impact is more on average hours worked?

2021 March Quarter	Employment	Employment Change		Unemployment Rate*
		Number	%	
Current forecast	2723.0			4.22%
MBIE Ris Option 5 (scaled)		10.8	0.40%	4.60%
MBIE 6,000 increase per $		13.5	0.50%	4.69%
Cross country lower		15.9	0.58%	4.78%
Cross country upper		24.2	0.89%	5.07%
* Assumes all of decrease in employment goes to unemployment i.e. no change in labour force				

Phillip Mellor | Senior Analyst | **The Treasury**
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From: Margaret Galt [TSY]
Sent: Wednesday, 25 October 2017 1:39 p.m.
To: Peter Mawson [TSY] <Peter.Mawson@treasury.govt.nz>; Kristie Carter [TSY]

<Kristie.Carter@treasury.govt.nz>
Cc: Phillip Mellor [TSY] <Phillip.Mellor@treasury.govt.nz>; Andrew Rutledge [TSY]
<Andrew.Rutledge@treasury.govt.nz>; Jennie Marjoribanks [TSY]
<Jennie.Marjoribanks@treasury.govt.nz>; Richard Baird [TSY] <Richard.Baird@treasury.govt.nz>; Bryan
Chapple [TSY] <Bryan.Chapple@treasury.govt.nz>
Subject: RE: Minimum wage and labour demand/unemployment

Hi Peter

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In terms of the impact, we have generally relied on the MBIE modelling, the most recent
iteration of which is found here.
RIS for Publication: Minimum Wage Review (Treasury:3679581v1) Add to worklist
If you need something quick and defendable (because it is a RIS for the most recent minimum
wage review) then you could just use the numbers that they have in table 1. These were done
in early 1

However, I would worry this understates the impact (see below).

Table 1: Summary of the impacts of the minimum wage options

Minimum wage rate impact measures	Option 1	Option 2	Option 3	Option 4	Option 5	Option
Adult minimum wage (hourly rate)	$15.25 (status quo)	$15.50	$15.75	$16.00	$16.50	$19.80[1]
Adult minimum wage (gross weekly income)[2]	$610	$620	$630	$640	$660	$792.00
Percentage increase	N/C	1.6%	3.3%	4.9%	8.2%	29.8%
Relativity to median wage[3]	64.9%	66.0%	67.0%	68.1%	70.2%	84.3%
Number of people impacted (rounded up to nearest 100)	73,300	89,900	119,500	142,700	212,000	528,700
Estimated restraint on employment	N/C	N/C	-1,500	-3,500	-7,000	-28,000
Estimated economy-wide increase in wages (annual)	N/C	$26m	$65m	$113m	$257m	$2,331m
Estimated inflationary impact/GDP (percentage points)	N/C	N/C	N/C	N/C	0.1%	0.7%
Additional annual costs to the government[4]	N/C	$15.33m	$29.38m	$40.44m	$87.10m	$543.55m[5]

s9(2)(g)(i)

My reading of the literature suggests the bigger the shift, the bigger
the impact that it has. While their model did increase the employment impact (from c3000 per

$ of increase for the $15.75 to c6,000 per $ of increase for the $19.80) it feels like a very small change of impact when moving from a 50 cents to a $4.55 per hour increase.

To be honest, I am not sure there is good evidence for what happens with a rapid rise to $20 . Most Governments have been mindful of the research that suggests small movements have little impact, and most countries have minimum wages that are far lower relative to the median wage than us. The nearest similar example I am aware of is the Seattle experience (which was a similar % increase but still much lower than our median wage) and which showed significant employment effects particularly in terms of hours of work. However, I feel obliged to warn you that this study has been very controversial, particularly s9(2)(g)(i)
s9(2)(g)(i)   in the US.

> This paper evaluates the wage, employment, and hours effects of the first and second phase-in of the Seattle Minimum Wage Ordinance, which raised the minimum wage from $9.47 to as much as $11 per hour in 2015 and to as much as $13 per hour in 2016. Using a variety of methods to analyze employment in all sectors paying below a specified real hourly rate, we conclude that the second wage increase to $13 reduced hours worked in low-wage jobs by around 9 percent, while hourly wages in such jobs increased by around 3 percent. Consequently, total payroll fell for such jobs, implying that the minimum wage ordinance lowered low-wage employees' earnings by an average of $125 per month in 2016. Evidence attributes more modest effects to the first wage increase. We estimate an effect of zero when analyzing employment in the restaurant industry at all wage levels, comparable to many prior studies.

> http://www.nber.org/papers/w23532?utm_campaign=ntw&utm_medium=email&utm_source=ntw

The main things I would say are that:

1. The extent of job losses depends on the employment conditions of the time. They will be higher if the job market is depressed and lower if it is not. So the impact is hard to predict because it varies.

2. The impact will also depend on the time period that is considered. Pacheco's research into the increases in the 2000s suggests that lifting the minimum wage did not so much lead to people being sacked, as to people not being hired. So the impact was bigger with the passage of time.

3. The extent will also depend on whether a youth rate is set below the adult rate. Youth are particularly affected by the minimum wage because of their lack on on-the-job experience and because they are entering the labour market. No youth rate would increase significantly the job losses

4. The relativity of our minimum wage with Australia's complicates things. For the first time our minimum wage would be at or near the (exchange rate) equivalent of the Australian one, and so it may change the migration flows across the Tasman. As we

haven't been like this before, it is hard to say what the impact would be, but the higher minimum wage may be particularly attractive to New Zealand residents living in Australia because minimum wage workers tend to face higher unemployment risks and they would qualify for benefits here, but not there.

I am away for the balance of the week, so Richard Baird is your best contact.

Best wishes

Margaret

Margaret Galt | Principal Advisor | **The Treasury**
s9(2)(k) | Margaret.Galt@treasury.govt.nz

I normally work Monday to Wednesday.

From: Peter Mawson [TSY]
Sent: Wednesday, 25 October 2017 11:36 a.m.
To: Margaret Galt [TSY] <margaret.galt@treasury.govt.nz>; Kristie Carter [TSY] <Kristie.Carter@treasury.govt.nz>
Cc: Phillip Mellor [TSY] <Phillip.Mellor@treasury.govt.nz>
Subject: Minimum wage and labour demand/unemployment

[IN-CONFIDENCE]

Hi Margaret and Kristie,

Can you please forward to Phil and I any recent reports/advice on the labour market impacts of minimum wages (or what external studies you believe are most representative for NZ). Do we/have we said much at the various annual reviews (obviously much smaller increases)?

The $20 by April 2021 is a reasonable amount higher than aggregate wage growth (see attached spreadsheet) so we will need to make some forecast judgements on:

- The impact on hours worked
- The impact on the number of unemployed.

We'll need to keep each other in the loop as we do our forecasts and provide advice. Who would be the best person in the labour market team to liaise with?

Thanks

Peter

Peter Mawson | Principal Advisor | **The Treasury**

s9(2)(k)   peter.mawson@treasury.govt.nz

1 April:	Minimum Wage				QES Average hourly (ordinary time,s.a)			Scenarios		
	History	$ change	% change	% of QES	HY17 Forecast*	$ change	% change	National average increase	Grow by QES	Labour/NZF Proposed
2000	$ 7.55			43%	$ 17.51			$ 7.55	$ 7.55	$ 7.55
2001	$ 7.70	$ 0.15	2.0%	43%	$ 18.08	$ 0.57	3.2%	$ 7.70	$ 7.70	$ 7.70
2002	$ 8.00	$ 0.30	3.9%	43%	$ 18.75	$ 0.67	3.7%	$ 8.00	$ 8.00	$ 8.00
2003	$ 8.50	$ 0.50	6.3%	44%	$ 19.18	$ 0.43	2.3%	$ 8.50	$ 8.50	$ 8.50
2004	$ 9.00	$ 0.50	5.9%	45%	$ 19.85	$ 0.67	3.5%	$ 9.00	$ 9.00	$ 9.00
2005	$ 9.50	$ 0.50	5.6%	46%	$ 20.57	$ 0.72	3.6%	$ 9.50	$ 9.50	$ 9.50
2006	$ 10.25	$ 0.75	7.9%	47%	$ 21.67	$ 1.10	5.4%	$ 10.25	$ 10.25	$ 10.25
2007	$ 11.25	$ 1.00	9.8%	50%	$ 22.67	$ 1.00	4.6%	$ 11.25	$ 11.25	$ 11.25
2008	$ 12.00	$ 0.75	6.7%	51%	$ 23.74	$ 1.07	4.7%	$ 12.00	$ 12.00	$ 12.00
2009	$ 12.50	$ 0.50	4.2%	50%	$ 25.04	$ 1.29	5.5%	$ 12.50	$ 12.50	$ 12.50
2010	$ 12.75	$ 0.25	2.0%	50%	$ 25.29	$ 0.25	1.0%	$ 12.75	$ 12.75	$ 12.75
2011	$ 13.00	$ 0.25	2.0%	50%	$ 25.94	$ 0.66	2.6%	$ 13.00	$ 13.00	$ 13.00
2012	$ 13.50	$ 0.50	3.8%	50%	$ 26.93	$ 0.99	3.8%	$ 13.50	$ 13.50	$ 13.50
2013	$ 13.75	$ 0.25	1.9%	50%	$ 27.49	$ 0.56	2.1%	$ 13.75	$ 13.75	$ 13.75
2014	$ 14.25	$ 0.50	3.6%	51%	$ 28.19	$ 0.70	2.6%	$ 14.25	$ 14.25	$ 14.25
2015	$ 14.75	$ 0.50	3.5%	51%	$ 28.79	$ 0.60	2.1%	$ 14.75	$ 14.75	$ 14.75
2016	$ 15.25	$ 0.50	3.4%	52%	$ 29.51	$ 0.71	2.5%	$ 15.25	$ 15.25	$ 15.25
2017	$ 15.75	$ 0.50	3.3%	53%	$ 29.94	$ 0.44	1.5%	$ 15.75	$ 15.75	$ 15.75
2018					$ 30.61	$ 0.66	2.2%	$ 16.25	16.10	
2019					$ 31.66	$ 1.05	3.4%	$ 16.75	16.65	
2020					$ 32.72	$ 1.07	3.4%	$ 17.25	17.21	
2021					$ 33.73	$ 1.01	3.1%	$ 17.75	17.74	$ 20.00
2022					$ 34.70	$ 0.97	2.9%	$ 18.25	18.25	

* HY17 with Labour fiscal policy, March quarter

59% share of QES
6.2% CAGR to 2021

About 3% of workforce on minimum wage in 2015
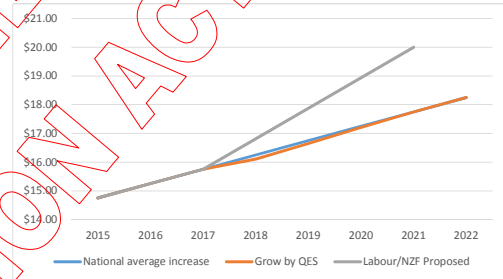
From:	Margaret Galt [TSY]
Sent:	Tuesday, 7 November 2017 2:20:24 PM
To:	Andrew Rutledge [TSY];Richard Baird [TSY];Jennie Marjoribanks [TSY]
Subject:	FW: Initial min wage impact analysis
Attachments:	3804923_1.docx, Minimum Wage Impact Analysis.xlsx, FW: New Zealand

Income Survey 2017

Hi Folks

I have been talking to the forecasting team and they indicated that they have been working on the impact of the minimum wage on their forecasts for HYEFU. The short note in word summarises where they have got to. They need to have it finalised by the end of the week.

Out of this, I have invited Phillip Mellor to the discussion with MBIE tomorrow as it is supposed to be covering both feedback on my note, and also their views on the reliability of their modelling going out to $20.

So you don't have to read it all, the main points in the note are that the key impact is likely to be:
- An increase in the annual wage bill of c$1.2-1.7 milion
- A reduction in hours work of about 0.55% in 2022. This is their mean estimate but it is sensitive to the assumption about the elasticity
- Splitting this 50/50 between hours and employment it implies a reduction in:
  - Hours per person on 0.27%
  - An increase in unemployment of 0.27%
  - The exclusion of the lowest productivity workers increases average productivity by c0.3%

They feel their estimate is high,

The key assumptions are:
- They have assumed the youth rate remains at 50% of the adult rate
- The elasticity assumption makes the most impact.
- The result is also sensitive to the assumption about the impact on the next two wage rate bands

Margaret

Margaret Galt | Principal Advisor | **The Treasury**

s9(2)(k)   Margaret.Galt@treasury.govt.nz

I normally work Monday to Wednesday.

From: Phillip Mellor [TSY]
Sent: Tuesday, 7 November 2017 1:21 p.m.
To: Margaret Galt [TSY] <margaret.galt@treasury.govt.nz>
Cc: Jennie Marjoribanks [TSY] <Jennie.Marjoribanks@treasury.govt.nz>
Subject: FW: Initial min wage impact analysis

Hi Margaret

As discussed, initial note on the minimum wage impacts plus my spreadsheet of analysis (apologies, it's a mess at the moment) and the custom data query from stats

Cheers

Phillip Mellor | Team Leader, Forecasting | The Treasury
s9(2)(k)   Phillip.Mellor@treasury.govt.nz

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From: Phillip Mellor [TSY]
Sent: Monday, 6 November 2017 10:43 p.m.
To: @Forecasting <Forecasting@treasury.govt.nz>; Katy Simpson [TSY] <Katy.Simpson@treasury.govt.nz>; Eric Tong [TSY] <Eric.Tong@treasury.govt.nz>; Anna Hamer-Adams [TSY] <Anna.Hamer-Adams@treasury.govt.nz>
Subject: Initial min wage impact analysis

[IN-CONFIDENCE]

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Based on latest wage distribution data for employees (i.e. excluding self-employed people), approximately 8.8% (175,000) of employees and 6.7% of hours worked by employees are at or below the minimum wage. Note the youth/starting out wage is set at 80% of minimum wage so some people can (legitimately) be below minimum wage. A further 21% (425,000) employees have earnings within 25% of the minimum wage.

As at June 2017					
	Total employees 000	Total hours worked (000)	($) Total earnings million (000000)	($) Mean hourly earnings	($) Median hourly earnings
Under the minimum wage	71	2364.2	31.4	13.33	14.38
Minimum wage	104	2555.6	40.2	15.75	15.75
Up to 5% above	101.9	2891.9	46.8	16.19	16.1
6-10% above	87.2	2859.4	48.6	16.98	17
11-15% above	99.9	3379	60.2	17.81	18
16-20% above	54.1	1935.1	35.8	18.52	18.5
21-25% above	82	3027.8	58.2	19.22	19.18
More than 25%	1377.5	54470.2	1858.4	33.99	29
Total	1977.6	73483.1	2179.6	28.77	24.29

Static analysis

Growing forward wages, employment and hours worked by the corresponding preliminary forecast growth rates provides some indication of how many people will be affected, assuming the wage distribution remains the same. This step indicates the minimum wage would be approximately $17.63 in 2021Q1. Approximately 15% of employees would have wages below the new minimum wage of $20. (The 11-15% band has a mean wage of $19.94, the 16-20% cohort $20.73).

Bringing the wages of those cohorts below the minimum wage to the minimum wage would add about $1.0 billion to the annual wage bill, assuming that the youth/starting out rate remains at 80% of minimum wage. If the youth/starting out rate is set at the same level (i.e. is abolished) then this would add a further $0.5 billion, taking the total additional to $1.5 billion.

If we assume that the next two tiers of employees are also affected then there is additional cost. An initial assumption is that these tiers retain half of their previous "premium" over the minimum wage. This would add a further $0.2 billion to the annual wage bill.

In total, this would suggest an increase of $1.2-1.7 billion in the annual wage bill. This is equivalent to about 0.8-1.2% of forecast COE in the year to March 2022 and about 1.2-1.7% of operating surplus (profits). Note this assumes there is only an impact on employees – self-employed (roughly 15% of total employment) are assumed to be unaffected.

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Impact on hours, productivity and potential

To lift wages as described above requires a weighted increase in wages of about 6.1% (relative to where they would have grown by). Applying a price elasticity of demand for hours of -0.4 (same as OBR study, TWP in the early 2000s puts it at -0.46) would lead to a reduction in total labour hours demanded of about 0.55% in 2022. If we allocated this 50/50 to hours per person and employment, this would imply a reduction in hours per person of around 0.27% and an increase in unemployment of 0.27% (about 7,500 people).

Assuming that wages are a proxy for productivity we can estimate the productivity impact (using GDP per hour as the productivity measure). Reducing the number of hours of lower productivity workers (those within 25% of minimum wage) but leaving productivity of others unchanged increases average productivity by around 0.3%.

Putting these together the total impact on potential output would be 0.3 less 0.55 = -0.25%.

Sensitivity to elasticity:

Elasticity	Hours impact	Potential output impact
-0.2	-0.27	-0.13
-0.3	-0.41	-0.19
-0.4	-0.55	-0.26
-0.46	-0.63	-0.30
-0.5	-0.68	-0.32
-0.6	-0.82	-0.39

The estimates are also sensitive to the pass through to the 16-25% cohort. For example just a quarter pass through to 16-20% cohort and none to the 21-25% cohort reduces the hours impact to -0.46% and potential output impact to -0.21% (with a -0.4 elasticity).

Conclusion

Overall the impact feels a little bit high to me, Deleted - Not Relevant to Request
A more recent elasticity estimate would help. Given NZ already has quite a high minimum wage relative to median, perhaps a smaller pass through to the 16-25% cohort would also be more appropriate i.e. our distribution is already quite bunched at the bottom and will become more so.

Szeto argues that the elasticity should be relative to real wages, but I'm not sure this is relevant here. The weighted wage increase used to adjust labour demand is to taken as the relative change to get from where they would have been otherwise to the new minimum wage. So unless there is a significant price inflation effect from the minimum wage (which there could be) then the relative change from old to new nominal wages should be similar as that from old to new real wages.

What else do the model operators need? OBR estimated impacts on real GDP, nominal GDP and inflation but I assume that these will all come from NZTM/MATAI.

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As at June 2017

Minimum_wage	sex	Total_employees_000	Total_hours_worked_(000)	($)_Total_earnings_million_(000000)	($)_Mean_hourly_earnings	($)_Median_hourly_earnings	Total_employees_000 2017Q2	2017Q3	2017Q4	2018Q1	2018Q2
Under the minimum wage	Total	71	2364.2	31.4	13.33	14.38	71	71.4615	71.96173	72.37685	72.95777
Minimum wage	Total	104	2555.6	40.2	15.75	15.75	104	104.676	105.4087	106.0168	106.8677
Up to 5% above	Total	101.9	2891.9	46.8	16.19	16.1	101.9	102.5624	103.2803	103.8761	104.7098
6-10% above	Total	87.2	2859.4	48.6	16.98	17	87.2	87.7668	88.38117	88.89101	89.60448
11-15% above	Total	99.9	3379	60.2	17.81	18	99.9	100.5494	101.2532	101.8373	102.6547
16-20% above	Total	54.1	1935.1	35.8	18.52	18.5	54.1	54.45165	54.83281	55.14912	55.59177
21-25% above	Total	82	3027.8	58.2	19.22	19.18	82	82.533	83.11074	83.59017	84.26109
More than 25%	Total	1377.5	54470.2	1858.4	33.99	29	1377.5	1386.454	1396.159	1404.213	1415.484
Total	Total	1977.6	73483.1	2179.6	28.77	24.29	1977.6	1990.454	2004.388	2015.95	2032.131

Current share at or under minimum wage	employees	8.8%	0.214957524
	hours	6.7%	

For year to March 2022
Total hours worked (HYEFU prelim)	367,019
Share that are employed	86%

Hours of those under min wage	hours (March yr 2022)	est wage @2021q1	new wage	% wage change	Additional wage bill		Additional wage bill (if youth wage = adult)	Premium over min wage	Pass through
Under the minimum wage	10,165	14.92	16.00	7.2%	10,961,985	51,621,621			
Minimum wage	10,988	17.63	20.00	13.4%	26,035,341	26,035,341			
Up to 5% above	12,434	18.12	20.00	10.4%	23,337,351	23,337,351			
6-10% above	12,294	19.01	20.00	5.2%	12,203,162	12,203,162			
11-15% above	14,528	19.94	20.00	0.3%	922,647	922,647			
					73,460,486	114,120,122			
					954.99	1,483.56			
Spillovers to bottom of income distribution									
16-20% above	8,320	20.73	21.76	5.0%	8,548,496	8,548,496	17.6%	50%
21-25% above	13,018	21.51	22.20	3.2%	8,960,729	8,960,729	22.0%	50%
					17,509,226	17,509,226			
					227.62	227.62			
Total additional wage bill					90,969,712	131,629,348			
More than 25%	234,195	38.05	38.05						
Total unadjusted in year to March 2022	315,942	32.21	32.21		10,174,930,285	10,174,930,285			
					0.9%	1.3%			
Scale to annual (from weekly) and convert to millions					1,182.61	1,711.18			
COE in 2022					144,266	144,266			
Impact on COE in 2022					0.8%	1.2%			
Operating Surplus in 2022					101,103	101,103			
Impact on operating surplus in 2022					1.2%	1.7%			

		Nominal	Real	
Weighted increase in wages		6.1%	3.9%	2.20%
Total effected hours		81,747	81,747	
Elasticity of demand		-0.4		
Impact on hours		(2,006.49)	(1,287.12)	
		-0.64%	-0.41% change vs employed hours	
		-0.55%	-0.35% change vs total hours	
Employment in March 2022		2744		
Share allocated to employment		50%		
Share allocated to hours per person		50%		
Impact on average hours per person		-0.27%	-0.18%	
Impact on unemployment		-0.27%	-0.18%	

Impact on employment	7.5	4.8
Change in productivity	0.3%	0.3%
Net effect on potential	-0.26%	-0.06%
Share to profits	50%	
Share to prices	50%	

2018Q3	2018Q4	2019Q1	2019Q2	2019Q3	2019Q4	2020Q1	2020Q2	2020Q3	2020Q4	2021Q1	2021Q2	2021Q3	2021Q4	2022Q1	2022Q2	Total_hours_worked_(000)								
																2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3	2018Q4	2019Q1	2019Q2
73.44989771	73.93794639	74.41352876	74.76908051	75.07206	75.30528	75.54347	75.75664	75.94906	76.11434	76.26433	76.39597	76.50286	76.69748	76.86501	77.02231	2364.2	2389.725	2404.587	2418.84	2435.821	2450.371	2464.737	2478.787	2489.411
107.5885826	108.3034708	109.0000985	109.5209067	109.9647	110.3063	110.6552	110.9675	111.2493	111.4914	111.7111	111.904	112.0605	112.3456	112.591	112.8214	2555.6	2583.192	2599.253	2614.664	2633.02	2648.747	2664.276	2679.464	2690.948
105.4161208	106.1165738	106.7991349	107.3094268	107.7443	108.079	108.4208	108.7268	109.0029	109.2402	109.4554	109.6444	109.7978	110.0771	110.3175	110.5433	2891.9	2923.123	2941.298	2958.736	2979.508	2997.304	3014.877	3032.063	3045.059
90.20888846	90.80829472	91.39239025	91.8290679	92.20117	92.48761	92.78015	93.04196	93.27828	93.48128	93.66549	93.82717	93.95844	94.19746	94.40323	94.59641	2859.4	2890.272	2908.242	2925.485	2946.023	2963.62	2980.995	2997.988	3010.838
103.3471096	104.0338147	104.7029792	105.2032555	105.6296	105.9577	106.2929	106.5928	106.8635	107.0961	107.3071	107.4924	107.6428	107.9166	108.1523	108.3736	3379	3415.482	3436.718	3457.094	3481.364	3502.158	3522.69	3542.772	3557.957
55.96675305	56.33863239	56.70101276	56.97193318	57.20279	57.3805	57.562	57.72443	57.87104	57.99698	58.11127	58.21158	58.29305	58.44132	58.56698	58.68883	1935.1	1955.992	1968.154	1979.823	1993.722	2005.631	2017.389	2028.889	2037.586
84.82945933	85.39312118	85.94238533	86.35302256	86.70294	86.97229	87.24739	87.49359	87.71581	87.9067	88.07993	88.23197	88.38543	88.58018	88.77368	88.95534	3027.8	3060.49	3079.519	3097.777	3119.525	3138.157	3156.556	3174.55	3188.157
1425.031466	1434.500298	1443.727266	1450.625471	1456.504	1461.028	1465.65	1469.786	1473.519	1476.725	1479.635	1482.19	1484.263	1488.039	1491.29	1494.341	54470.2	55058.29	55400.62	55729.09	56120.33	56455.53	56786.52	57110.23	57355.02
2045.838278	2059.432152	2072.678795	2082.582164	2091.021	2097.517	2104.152	2110.089	2115.449	2120.052	2124.23	2127.897	2130.874	2136.295	2140.961	2145.342	73483.1	74276.46	74738.29	75181.41	75709.21	76161.42	76607.94	77044.64	77374.87

Weighted by earnings

Real GDP	Real GDP per hour	New hours (nominal)	New hours (real)
3842	0.38	9871	9960.504549
4907	0.45	10397	10493.84125
5708	0.46	11919	12028.09319
5920	0.48	12037	12145.40672
7337	0.51	14510	14637.39027
4369	0.53	8155	8228.264677
7095	0.55	12851	12966.02883
225729	0.96	234195	236256.263
264908.09	0.84	313936	316716
	0.84	0.84	Revised productivity
	0.3%	0.3%	

($)_Total_earnings_million_(000000)

2019Q3	2019Q4	2020Q1	2020Q2	2020Q3	2020Q4	2021Q1	2021Q2	2021Q3	2021Q4	2022Q1	2022Q2	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3	2018Q4	2019Q1	2019Q2	2019Q3	2019Q4	2020Q1	2020Q2	2020Q3	2020Q4	2021Q1	2021Q2	2021Q3
2498.488	2505.427	2511.958	2517.79	2523.051	2527.515	2531.561	2535.078	2537.845	2543.558	2548.429	2553.006	31514.79	31991.2	32321.44	32749.16	33253.78	33751.44	34230.49	34713.67	35153.25	35577.8	35976.35	36364.29	36736.1	37094.96	37439.14	37774.9	38101.22	38418
2700.76	2708.26	2715.32	2721.624	2727.311	2732.136	2736.51	2740.312	2743.303	2749.478	2754.743	2759.691	40250.7	40859.17	41280.96	41827.24	42471.74	43107.35	43719.2	44335.04	44897.75	45439.98	45949.01	46444.49	46919.37	47377.7	47817.29	48246.12	48662.89	49067.48
3056.162	3064.649	3072.638	3079.772	3086.207	3091.668	3096.616	3100.919	3104.303	3111.291	3117.249	3122.849	46819.86	47527.64	48018.26	48653.7	49403.39	50142.74	50854.4	51570.78	52225.34	52856.07	53448.17	54024.52	54576.89	55110.04	55621.36	56120.18	56604.98	57075.6
3021.816	3030.208	3038.107	3045.16	3051.523	3056.922	3061.815	3066.07	3069.416	3076.326	3082.217	3087.753	48552.61	49286.59	49795.36	50454.32	51231.76	51998.47	52736.51	53479.36	54158.14	54812.21	55426.23	56023.9	56596.72	57149.6	57679.85	58197.12	58699.86	59187.9
3570.93	3580.847	3590.181	3598.516	3606.035	3612.416	3618.198	3623.225	3627.179	3635.345	3642.306	3648.849	60179.99	61089.74	61720.36	62537.12	63500.74	64451.06	65365.84	66286.6	67127.93	67938.64	68699.7	69440.51	70150.5	70835.78	71493.02	72134.17	72757.3	73362.22
2045.015	2050.694	2056.04	2060.813	2065.12	2068.773	2072.085	2074.964	2077.228	2081.905	2085.891	2089.638	35838.05	36379.82	36755.36	37241.76	37815.61	38381.53	38926.3	39474.63	39975.65	40458.44	40911.66	41352.82	41775.64	42183.73	42575.12	42956.94	43328.02	43688.26
3199.781	3208.668	3217.031	3224.5	3231.238	3236.955	3242.136	3246.641	3250.185	3257.501	3263.739	3269.602	58194.32	59074.05	59683.86	60473.67	61405.49	62324.46	63209.06	64099.43	64913	65696.96	66432.91	67149.28	67835.85	68498.51	69134.06	69754.06	70356.63	70941.59
57564.15	57724.01	57874.48	58008.85	58130.06	58232.91	58326.12	58407.16	58470.9	58602.53	58714.75	58820.22	1851442	1879431	1898832	1923959	1953605	1962842	2010985	2039312	2065196	2090137	2113352	2136343	2158186	2179268	2199488	2219213	2238384	2256994
77657	77872.66	78075.64	78256.91	78420.44	78559.19	78684.93	78794.26	78880.26	79057.83	79209.22	79351.5	2172792	2205639	2228407	2257896	2292688	2326999	2360027	2393271	2423647	2452918	2480396	2507142	2532777	2557519	2581248	2604397	2626895	2648735

| | | | ($)_Mean_hourly_earnings | | | | | | | | | | | | | | | | | | | | | | ($)_Median_hourly_earnings | | | | | |
2021Q4	2022Q1	2022Q2	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3	2018Q4	2019Q1	2019Q2	2019Q3	2019Q4	2020Q1	2020Q2	2020Q3	2020Q4	2021Q1	2021Q2	2021Q3	2021Q4	2022Q1	2022Q2	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3
38771.37	39116.85	39465.11	13.33	13.38698	13.44159	13.5392	13.65198	13.77401	13.88809	14.00389	14.12111	14.23973	14.35937	14.47647	14.59061	14.70242	14.81263	14.92159	15.0296	15.13804	15.24297	15.3494	15.45829	14.38	14.44147	14.50038	14.60568	14.72734	14.85899
49518.81	49960.06	50404.86	15.75	15.81732	15.88185	15.99718	16.13043	16.27462	16.40941	16.54624	16.68473	16.82489	16.96625	17.10461	17.23947	17.37158	17.50179	17.63053	17.75816	17.88628	18.01026	18.13601	18.26487	15.75	15.81732	15.88185	15.99718	16.13043	16.27462
57600.59	58113.85	58631.24	16.19	16.2592	16.32554	16.44408	16.58106	16.72928	16.86783	17.00848	17.15085	17.29492	17.44022	17.58246	17.72108	17.85688	17.99073	18.12307	18.25426	18.38596	18.5134	18.64267	18.77492	16.1	16.16882	16.23478	16.35267	16.48889	16.63628
59732.32	60264.58	60801.11	16.98	17.05258	17.12215	17.24648	17.39014	17.54559	17.69091	17.83842	17.98773	18.13883	18.29123	18.4404	18.58579	18.72822	18.8686	19.00739	19.14499	19.28311	19.41677	19.55235	19.69105	17	17.07267	17.14232	17.26679	17.41063	17.56626
74037.02	74696.74	75361.76	17.81	17.88613	17.9591	18.08951	18.24019	18.40324	18.55566	18.71038	18.86699	19.02547	19.18532	19.34179	19.49429	19.64367	19.79092	19.93649	20.08081	20.22569	20.36589	20.50809	20.65357	18	18.07694	18.15069	18.28249	18.43478	18.59957
44090.11	44482.98	44879.02	18.52	18.59916	18.67504	18.81065	18.96734	19.13689	19.29539	19.45627	19.61913	19.78393	19.95015	20.11285	20.27143	20.42677	20.57989	20.73127	20.88134	21.032	21.17778	21.32565	21.47693	18.5	18.57908	18.65488	18.79033	18.94686	19.11622
71594.12	72232.07	72875.16	19.22	19.30215	19.3809	19.52163	19.68425	19.86021	20.02469	20.19166	20.36067	20.5317	20.70421	20.87306	21.03763	21.19884	21.35774	21.51484	21.67059	21.82694	21.97823	22.13169	22.2887	19.18	19.26198	19.34057	19.48101	19.64328	19.81887
2277755	2298051	2318510	33.99	34.13529	34.27455	34.52343	34.81101	35.12219	35.41307	35.70835	36.00724	36.30971	36.61477	36.91338	37.20443	37.48953	37.77054	38.04836	38.3238	38.6003	38.86785	39.13924	39.4169	29	29.12396	29.24278	29.45512	29.70048	29.96597
2673099	2696918	2720929	28.77	28.89298	29.01085	29.22151	29.46492	29.72831	29.97453	30.22446	30.47744	30.73346	30.99168	31.24442	31.49077	31.73209	31.96994	32.2051	32.43824	32.67127	32.89874	33.12845	33.36346	24.29	24.39383	24.49335	24.6712	24.87671	25.09909

0.134396
0.103566
0.052222
0.003186

2018Q4	2019Q1	2019Q2	2019Q3	2019Q4	2020Q1	2020Q2	2020Q3	2020Q4	2021Q1	2021Q2	2021Q3	2021Q4	2022Q1	2022Q2
14.98205	15.10698	15.23343	15.36139	15.49045	15.61678	15.73991	15.86053	15.97942	16.09695	16.21348	16.33046	16.44365	16.55847	16.67593
16.40941	16.54624	16.68473	16.82489	16.96625	17.10461	17.23947	17.37158	17.50179	17.63053	17.75816	17.88628	18.01026	18.13601	18.26467
16.77407	16.91393	17.0555	17.19877	17.34327	17.48471	17.62257	17.75762	17.89072	18.02232	18.15278	18.28375	18.41049	18.53904	18.67055
17.71175	17.85943	18.00892	18.1602	18.31277	18.46212	18.60769	18.75028	18.89082	19.02978	19.16754	19.30583	19.43964	19.57538	19.71425
18.75361	18.90998	19.06827	19.22844	19.39	19.54813	19.70226	19.85324	20.00205	20.14918	20.29504	20.44146	20.58315	20.72687	20.87391
19.27455	19.43526	19.59794	19.76257	19.92861	20.09113	20.24954	20.40471	20.55766	20.70888	20.85879	21.00928	21.15491	21.30262	21.45374
19.98302	20.14964	20.3183	20.48897	20.66112	20.82962	20.99385	21.15473	21.3133	21.47007	21.62549	21.78152	21.93249	22.08563	22.24231
30.21416	30.46608	30.72109	30.97916	31.23944	31.49421	31.74252	31.98577	32.22552	32.46256	32.69756	32.93347	33.16175	33.39329	33.63019
25.30696	25.51797	25.73156	25.94771	26.16572	26.37911	26.5871	26.79084	26.99166	27.1902	27.38703	27.58462	27.77582	27.96976	28.16818

	Levels						QPC
	HY17P2::LHEMPZQ	HY17P2::LHHWZQ	HY17P2::LQHOTOZQ	HY17P2::FCOEQ	Operating Surplus Real Prod GDP		HY17P2::LHEMPZQ
1990Q1	1533	53434	13.67204894			28077	
1990Q2	1543	53117	13.8248937			28074	0.7%
1990Q3	1536	53543	13.99823304			28327	-0.5%
1990Q4	1527	52668	14.15447623			28661	-0.6%
1991Q1	1519	51774	14.27544698			27967	-0.5%
1991Q2	1513	52259	14.37112745	8098.249403		27777	-0.4%
1991Q3	1505	52141	14.51737108	8116.026392		27865	-0.5%
1991Q4	1499	51593	14.59434235	8111.07186		28047	-0.4%
1992Q1	1508	52366	14.67127307	8208.652345		28127	0.6%
1992Q2	1518	52795	14.71756555	8291.901095		28127	0.7%
1992Q3	1511	52172	14.72381167	8247.974384		27925	-0.5%
1992Q4	1518	52101	14.75468205	8322.949126		28273	0.5%
1993Q1	1526	54262	14.7094264	8356.175395		28736	0.5%
1993Q2	1535	53943	14.77230804	8533.976301		29372	0.6%
1993Q3	1552	54905	14.75097763	8631.197564		29966	1.1%
1993Q4	1566	56803	14.78467097	8735.342259		30247	0.9%
1994Q1	1582	54559	14.85598743	8865.483876		30709	1.0%
1994Q2	1599	56908	14.93973438	9036.617137		30918	1.1%
1994Q3	1620	57862	14.98624308	9191.406784		31446	1.3%
1994Q4	1643	59331	15.05571764	9351.393789		31860	1.4%
1995Q1	1662	58357	15.14220983	9508.582289		32244	1.2%
1995Q2	1678	59232	15.2472611	9625.759924		32666	1.0%
1995Q3	1695	60184	15.38264239	9756.034285		32965	1.0%
1995Q4	1709	60752	15.49512705	9883.894244		33190	0.8%
1996Q1	1722	61456	15.61620099	10063.31155		33648	0.8%
1996Q2	1740	61445	15.80145221	10300.08821		33953	1.0%
1996Q3	1754	61340	15.92365958	10479.14484		34177	0.8%
1996Q4	1744	61046	16.09500433	10540.17805		34632	-0.6%
1997Q1	1745	61502	16.29092141	10650.58889		34497	0.1%
1997Q2	1754	61325	16.39671607	10914.84343		35175	0.5%
1997Q3	1752	61130	16.52436385	10924.44752		35087	-0.1%

1997Q4	1750	60697	16.61467385	10925.52425		35014	-0.1%
1998Q1	1745	60644	16.71234022	10942.1848		34803	-0.3%
1998Q2	1738	61361	16.87735863	11078.30125		34973	-0.4%
1998Q3	1737	61145	16.94160463	11139.40582		35037	-0.1%
1998Q4	1734	59960	17.13617877	11188.36539		35387	-0.2%
1999Q1	1752	61877	17.21323746	11307.92755		35803	1.0%
1999Q2	1758	61703	17.27602262	11290.30656		36099	0.3%
1999Q3	1766	62028	17.46293378	11424.3215		37105	0.5%
1999Q4	1786	63452	17.44427924	11554.61916		37565	1.1%
2000Q1	1784	62725	17.51485065	11547.75277		38115	-0.1%
2000Q2	1784	62520	17.63364214	11733.86397		38127	0.0%
2000Q3	1806	63851	17.76571017	11970.29321		38282	1.2%
2000Q4	1822	64164	17.88179009	12164.44612		38353	0.9%
2001Q1	1824	63812	18.08228777	12272.3967		38484	0.1%
2001Q2	1841	64391	18.21077954	12655.8819		39027	0.9%
2001Q3	1845	64333	18.37271605	12738.3951		39328	0.2%
2001Q4	1868	64948	18.50299815	12989.95119		39906	1.2%
2002Q1	1893	66122	18.7498127	13336.77181		40263	1.3%
2002Q2	1905	66574	18.66096106	13444.18785		40806	0.6%
2002Q3	1903	66666	18.9628471	13699.90336		41257	-0.1%
2002Q4	1918	66507	19.16871504	13903.8222		41815	0.8%
2003Q1	1926	67550	19.18409422	14082.08659		42056	0.4%
2003Q2	1942	67375	19.33829793	14515.91202		42259	0.8%
2003Q3	1971	68436	19.54618938	14784.69023		43138	1.5%
2003Q4	1973	68855	19.82500993	14914.49126		43690	0.1%
2004Q1	1991	70326	19.85457231	15157.9065		44401	0.9%
2004Q2	2006	71069	20.17967434	15623.13577		44829	0.8%
2004Q3	2030	70794	20.22886858	15935.79649		44891	1.2%
2004Q4	2064	72015	20.25008281	16305.39863		45074	1.7%
2005Q1	2062	71741	20.57091256	16482.6691		45568	-0.1%
2005Q2	2071	71720	20.92833735	17009.26535		46367	0.4%
2005Q3	2098	73628	21.12767745	17290.20688		46501	1.3%
2005Q4	2099	72279	21.3777422	17491.98736		46361	0.0%

2006Q1	2120	72433	21.67165464	17904.5404	47100	1.0%
2006Q2	2140	73590	21.87569462	18210.3617	47330	0.9%
2006Q3	2133	73612	22.20520442	18488.16568	47680	-0.3%
2006Q4	2133	73902	22.46857202	18718.41918	47994	0.0%
2007Q1	2159	73428	22.67244843	19032.05344	48527	1.2%
2007Q2	2170	74068	22.84188893	19751.91753	48884	0.5%
2007Q3	2166	73878	23.09025125	19906.61591	49325	-0.2%
2007Q4	2180	74203	23.41984873	20357.75028	49472	0.6%
2008Q1	2182	74163	23.74248278	20764.71628	49367	0.1%
2008Q2	2181	73575	24.07723804	20956.03045	49111	0.0%
2008Q3	2182	73819	24.39268011	21191.83057	48929	0.0%
2008Q4	2195	73411	24.69954465	21483.33674	48701	0.6%
2009Q1	2156	72553	25.03736015	21472.80225	48110	-1.8%
2009Q2	2157	71980	25.2106805	21549.92017	48128	0.0%
2009Q3	2137	71131	25.35102394	21458.4559	48320	-0.9%
2009Q4	2139	71009	25.39681571	21405.54552	48828	0.1%
2010Q1	2147	72257	25.28748614	21408.07841	48955	0.4%
2010Q2	2151	72374	25.48322785	21712.81951	49382	0.2%
2010Q3	2169	72905	25.62979852	22085.1178	49305	0.8%
2010Q4	2161	73421	25.85819025	22395.3508	49004	-0.4%
2011Q1	2181	71729	25.94262632	22637.71189	49526	0.9%
2011Q2	2188	73671	26.2596047	22776.49307	49848	0.3%
2011Q3	2192	74016	26.43838933	22999.95216	50318	0.2%
2011Q4	2192	73564	26.58636672	23172.6419	50507	0.0%
2012Q1	2194	72452	26.93053436	23355.91287	50975	0.1%
2012Q2	2196	73214	27.0223668	23599.22905	51118	0.1%
2012Q3	2188	72842	27.17128853	23622.63144	51218	-0.4%
2012Q4	2195	73943	27.27347593	23807.10396	51928	0.3%
2013Q1	2198	74748	27.48933857	24024.03555	51886	0.1%
2013Q2	2208	74345	27.59884635	23810.9973	52447	0.5%
2013Q3	2243	75375	27.88008074	24587.39037	52671	1.6%
2013Q4	2259	75411	28.04837032	24905.09334	52677	0.7%
2014Q1	2280	77099	28.19305994	25375.519	53440	0.9%

2014Q2	2287	77480	28.2985032	25462.92891		53849	0.3%
2014Q3	2314	77818	28.52190371	25782.89495		54452	1.2%
2014Q4	2340	78041	28.78201319	26314.26659		55027	1.1%
2015Q1	2354	79081	28.79190096	26630.90955		55087	0.6%
2015Q2	2354	78590	29.07198455	26969.37724		55151	0.0%
2015Q3	2349	78860	29.19628441	27065.65522		55656	-0.2%
2015Q4	2372	79799	29.38396636	27511.85085		56255	1.0%
2016Q1	2401	81113	29.50572623	27805.11669		56645	1.2%
2016Q2	2459	83160	29.67099285	28194.38832		57086	2.4%
2016Q3	2493	84126	29.68987351	28731.62391		57481	1.4%
2016Q4	2510	85080	29.75051655	29024.48267		57695	0.7%
2017Q1	2538	84555	29.94311239	29565.574	77241.88348	58054	1.1%
2017Q2	2535	85363	30.13307558	29703.50503		58521	-0.1%
2017Q3	2551.4775	86284.62524	30.26187751	29889.98683		58989.168	0.6%
2017Q4	2569.338	86821.11406	30.38533873	30198.5341		59579.05968	0.7%
2018Q1	2584.1595	87335.86975	30.60597598	30598.15342	82550.75479	60443.23	0.6%
2018Q2	2604.9008	87948.99677	30.86092266	31069.63497		60863.9	0.8%
2018Q3	2622.4717	88474.31607	31.13679091	31534.60506		61423.88	0.7%
2018Q4	2639.8971	88993.02356	31.39467052	31982.19483		61973.47	0.7%
2019Q1	2656.8774	89500.33158	31.6564425	32432.70591	87406.68989	62496.68	0.6%
2019Q2	2669.5721	89883.94408	31.92141509	32844.34489		62930.18	0.5%
2019Q3	2680.3896	90211.68704	32.1895605	33241.00356		63205.88	0.4%
2019Q4	2688.7166	90462.2123	32.46001039	33613.38683		63566.69	0.3%
2020Q1	2697.2212	90698.01348	32.72473413	33975.85537	92220.23808	63908.61	0.3%
2020Q2	2704.8322	90908.58951	32.98275277	34323.23539		64256.71	0.3%
2020Q3	2711.7022	91098.54653	33.23550337	34658.51706		64586.16	0.3%
2020Q4	2717.6036	91259.72989	33.48462662	34980.09711		64922.09	0.2%
2021Q1	2722.9589	91405.804	33.73092765	35293.79847	96414.09459	65246.86	0.2%
2021Q2	2727.6591	91532.80599	33.97510736	35598.68673		65540.61	0.2%
2021Q3	2731.4754	91632.70504	34.22023273	35894.65368		66144.66	0.1%
2021Q4	2738.424	91838.98405	34.45742802	36224.83044		66440.58	0.3%
2022Q1	2744.4058	92014.85033	34.69802218	36547.61048	101103.1463	66782.24	0.2%
2022Q2	2750.0218	92180.12988	34.9441714	36873.00692		67153.69	0.2%

HY17P2::LHHWZQ	HY17P2::LQHOTOZQ	HY17P2::FCOEQ
-0.6%	1.1%	
0.8%	1.3%	
-1.6%	1.1%	
-1.7%	0.9%	
0.9%	0.7%	
-0.2%	1.0%	0.2%
-1.1%	0.5%	-0.1%
1.5%	0.5%	1.2%
0.8%	0.3%	1.0%
-1.2%	0.0%	-0.5%
-0.1%	0.2%	0.9%
4.1%	-0.3%	0.4%
-0.6%	0.4%	2.1%
1.8%	-0.1%	1.1%
3.5%	0.2%	1.2%
-4.0%	0.5%	1.5%
4.3%	0.6%	1.9%
1.7%	0.3%	1.7%
2.5%	0.5%	1.7%
-1.6%	0.6%	1.7%
1.5%	0.7%	1.2%
1.6%	0.9%	1.4%
0.9%	0.7%	1.3%
1.2%	0.8%	1.8%
0.0%	1.2%	2.4%
-0.2%	0.8%	1.7%
-0.5%	1.1%	0.6%
0.7%	1.2%	1.0%
-0.3%	0.6%	2.5%
-0.3%	0.8%	0.1%

Transposed

	2017Q3	2017Q4	2018Q1	2018Q2
HY17P2::LHEMPZQ	0.6%	0.7%	0.6%	0.8%
HY17P2::LHHWZQ	1.1%	0.6%	0.6%	0.7%
HY17P2::LQHOTOZQ	0.4%	0.4%	0.7%	0.8%
HY17P2::FCOEQ	0.6%	1.0%	1.3%	1.5%

-0.7%	0.5%	0.0%
-0.1%	0.6%	0.2%
1.2%	1.0%	1.2%
-0.4%	0.4%	0.6%
-1.9%	1.1%	0.4%
3.2%	0.4%	1.1%
-0.3%	0.4%	-0.2%
0.5%	1.1%	1.2%
2.3%	-0.1%	1.1%
-1.1%	0.4%	-0.1%
-0.3%	0.7%	1.6%
2.1%	0.7%	2.0%
0.5%	0.7%	1.6%
-0.5%	1.1%	0.9%
0.9%	0.7%	3.1%
-0.1%	0.9%	0.7%
1.0%	0.7%	2.0%
1.8%	1.3%	2.7%
0.7%	-0.5%	0.8%
0.1%	1.6%	1.9%
-0.2%	1.1%	1.5%
1.6%	0.1%	1.3%
-0.3%	0.8%	3.1%
1.6%	1.1%	1.9%
0.6%	1.4%	0.9%
2.1%	0.1%	1.6%
1.1%	1.6%	3.1%
-0.4%	0.2%	2.0%
1.7%	0.1%	2.3%
-0.4%	1.6%	1.1%
0.0%	1.7%	3.2%
2.7%	1.0%	1.7%
-1.8%	1.2%	1.2%

0.2%	1.4%	2.4%
1.6%	0.9%	1.7%
0.0%	1.5%	1.5%
0.4%	1.2%	1.2%
-0.6%	0.9%	1.7%
0.9%	0.7%	3.8%
-0.3%	1.1%	0.8%
0.4%	1.4%	2.3%
-0.1%	1.4%	2.0%
-0.8%	1.4%	0.9%
0.3%	1.3%	1.1%
-0.6%	1.3%	1.4%
-1.2%	1.4%	0.0%
-0.8%	0.7%	0.4%
-1.2%	0.6%	-0.4%
-0.2%	0.2%	-0.2%
1.8%	-0.4%	0.0%
0.2%	0.8%	1.4%
0.7%	0.6%	1.7%
0.7%	0.9%	1.4%
-2.3%	0.3%	1.1%
2.7%	1.2%	0.6%
0.5%	0.7%	1.0%
-0.6%	0.6%	0.8%
-1.5%	1.3%	0.8%
1.1%	0.3%	1.0%
-0.5%	0.6%	0.1%
1.5%	0.4%	0.8%
1.1%	0.8%	0.9%
-0.5%	0.4%	-0.9%
1.4%	1.0%	3.3%
0.0%	0.6%	1.3%
2.2%	0.5%	1.9%

0.5%	0.4%	0.3%
0.4%	0.8%	1.3%
0.3%	0.9%	2.1%
1.3%	0.0%	1.2%
-0.6%	1.0%	1.3%
0.3%	0.4%	0.4%
1.2%	0.6%	1.6%
1.6%	0.4%	1.1%
2.5%	0.6%	1.4%
1.2%	0.1%	1.9%
1.1%	0.2%	1.0%
-0.6%	0.6%	1.9%
1.0%	0.6%	0.5%
1.1%	0.4%	0.6%
0.6%	0.4%	1.0%
0.6%	0.7%	1.3%
0.7%	0.8%	1.5%
0.6%	0.9%	1.5%
0.6%	0.8%	1.4%
0.6%	0.8%	1.4%
0.4%	0.8%	1.3%
0.4%	0.8%	1.2%
0.3%	0.8%	1.1%
0.3%	0.8%	1.1%
0.2%	0.8%	1.0%
0.2%	0.8%	1.0%
0.2%	0.7%	0.9%
0.2%	0.7%	0.9%
0.1%	0.7%	0.9%
0.1%	0.7%	0.8%
0.2%	0.7%	0.9%
0.2%	0.7%	0.9%
0.2%	0.7%	0.9%

2018Q3	2018Q4	2019Q1	2019Q2	2019Q3	2019Q4	2020Q1	2020Q2	2020Q3	2020Q4	2021Q1	2021Q2	2021Q3	2021Q4
0.7%	0.7%	0.6%	0.5%	0.4%	0.3%	0.3%	0.3%	0.3%	0.2%	0.2%	0.2%	0.1%	0.3%
0.6%	0.6%	0.6%	0.4%	0.4%	0.3%	0.3%	0.2%	0.2%	0.2%	0.2%	0.1%	0.1%	0.2%
0.9%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.7%	0.7%	0.7%	0.7%	0.7%
1.5%	1.4%	1.4%	1.3%	1.2%	1.1%	1.1%	1.0%	1.0%	0.9%	0.9%	0.9%	0.8%	0.9%

2022Q1	2022Q2
0.2%	0.2%
0.2%	0.2%
0.7%	0.7%
0.9%	0.9%

Excerpts from Treasury Report: Fiscal Strategy for the 2018 Budget Policy Statement

Risks and Uncertainties to the preliminary HYEFU Economic and Tax Forecasts

1. The main risks to the economic forecasts are largely unchanged from PREFU. Key risks to domestic activity include:

    *   There is also uncertainty around the size of the impact of the policies that we have not yet accounted for. While our estimates will be improved as policy detail is confirmed and finalised, the nature of the policies means that they will remain a risk to our forecasts. For example, further detail on the phasing of minimum wage increases will help us assess the impact, although given the material size of the increases the impact on unemployment will remain a risk.

Preliminary HYEFU Fiscal Forecasts

32. The proposed lift in the minimum wage to $20 per hour by April 2021 and the tax and welfare changes of the Families Package both have implications for the labour market and wider economy. The change in the minimum wage will increase the cost of labour. Judgements will need to be made about the extent of the impact of this on the total number of hours worked in the economy. Overall, the impact of the higher minimum wage is likely to reduce the level of real GDP but the impact on nominal GDP may be more neutral, and there will be income gains for low-income workers.

Summary of Minimum Wage Impacts

	March years			
	2019	2020	2021	2022
Wages (mean hourly earnings, as at 1 April/March quarter)				
"Old" minimum wage	16.00	16.55	17.10	17.63
"New" minimum wage	16.50	17.70	18.80	20.00
Total employees (not adjusted for new minimum wage)	30.03	31.06	32.11	33.10
Total employees (adjusted for new minimum wage)	30.05	31.16	32.29	33.39
Hours worked affected (hours per week, annual sum)				
Under the new minimum wage	32,479	33,059	45,587	60,409
Share of total employee hours	10.6%	10.6%	14.5%	19.1%
Spillover to bottom of income distribution	46,572	47,404	35,637	21,338
Share of total employee hours	15.2%	15.2%	11.4%	6.8%
Total affected hours	79,051	80,463	81,224	81,747
Share of total employee hours	25.9%	25.9%	25.9%	25.9%
Total employee hours	305,523	310,980	313,921	315,942
Total hours	354,917	361,256	364,673	367,019
Static cost estimates ($ millions)				
Bring workers to new minimum wage	78	293	567	955
Spillover to bottom of income distribution	-	114	166	228
Total	78	407	733	1,183
Share of COE	0.1%	0.3%	0.5%	0.8%
Share of Operating Surplus	0.1%	0.4%	0.8%	1.2%
Youth / starting out rate abolished	378	460	494	529
Macroeconomic impacts				
Weighted increase in lower income wages	0.5%	2.3%	4.0%	6.1%
Weighted increase in total wages	0.1%	0.6%	1.0%	1.6%
Total impact on hours worked	-0.03%	-0.15%	-0.27%	-0.41%
Average hours per person	-0.02%	-0.08%	-0.13%	-0.21%
Employment	-0.02%	-0.08%	-0.13%	-0.21%
Impact on labour productivity	0.02%	0.08%	0.14%	0.22%
Impact on potential output	-0.01%	-0.07%	-0.12%	-0.19%

Assumptions

Youth rate to min wage	80%
Pass through assumption	50%
Elasticity of labour	-0.3
Hours impact on employment	50%
Hours impact on average per person	50%
Minimum wage phasing	Change row 6 above

Mean hourly earnings

Legend: "Old" Minimum wage, Up to 5% above, 6-10% above, 11-15% above, 16-20% above, 21-25% above, "New" minimum wage

Distribution of Wages (bottom 25%)

Legend: 2019, 2020, 2021, 2022

	Wages				Increments			
	2019	2020	2021	2022	2019	2020	2021	2022
Under the	13.54	14.00	14.48	14.92	13.54	14.00	14.48	14.92
"Old" Mini	16.00	16.55	17.10	17.63	16.00	16.55	17.10	17.63
Up to 5% a	16.44	17.01	17.58	18.12	0.45	0.46	0.48	0.49
6-10% abo	17.25	17.84	18.44	19.01	0.80	0.83	0.86	0.88
11-15% ab	18.09	18.71	19.34	19.94	0.84	0.87	0.90	0.93
16-20% ab	18.81	19.46	20.11	20.73	0.72	0.75	0.77	0.79
21-25% ab	19.52	20.19	20.87	21.51	0.71	0.74	0.76	0.78
"New" min	16.50	17.70	18.80	20.00	16.50	17.70	18.80	20.00

Share				
Wages	2019	2020	2021	2022
13.5392	3%			
16.5	7%			
17.24648	4%			
18.08951	5%			
18.81065	3%			
19.52163	4%			
14.16		3%		
17.7		7%		
18.39114		4%		
18.85752		5%		
19.45627		3%		
20.19166		4%		
15.04			3%	
18.8			11%	
20.02946			5%	
20.45321			3%	
20.87306			4%	
16				3%
20				16%
21.75873				3%
22.20317				4%

As at June 2017

Minimum_wage	sex	Total_employees_000	Total_hours_worked_(000)	($)_Total_earnings_million_(000000)	($)_Mean_hourly_earnings	($)_Median_hourly_earning	Total_employees_000 2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3
Under the minimum wage	Total	71	2364.2	31.4	13.33	14.38	71	71.4615	71.96173	72.37685	72.95777	73.44989771
Minimum wage	Total	104	2555.6	40.2	15.75	15.75	104	104.676	105.4087	106.0168	106.8677	107.5885826
Up to 5% above	Total	101.9	2891.9	46.8	16.19	16.1	101.9	102.5624	103.2803	103.8761	104.7098	105.4161208
6-10% above	Total	87.2	2859.4	48.6	16.98	17	87.2	87.7668	88.38117	88.89101	89.60448	90.20888846
11-15% above	Total	99.9	3379	60.2	17.81	18	99.9	100.5494	101.2532	101.8373	102.6547	103.3471096
16-20% above	Total	54.1	1935.1	35.8	18.52	18.5	54.1	54.45165	54.83281	55.14912	55.59177	55.96675305
21-25% above	Total	82	3027.8	58.2	19.22	19.18	82	82.533	83.11074	83.59017	84.26109	84.82945933
More than 25%	Total	1377.5	54470.2	1858.4	33.99	29	1377.5	1386.454	1396.159	1404.213	1415.484	1425.031466
Total	Total	1977.6	73483.1	2179.6	24.77	24.28	1977.6	1990.454	2004.388	2015.95	2032.131	2045.838278

Current share at or under minimum wage	employees	8.8%	0.214957524
	hours	6.7%	

For year to March 2019 ($16.50)

Total hours worked (HYEFU prelim)	354,917	# hours worked each week for year ending Mar 2019
Share that are employed	86%	

Weighted by earnings

Hours of those under min wage	hours (March yr 2019)	est wage @2018q1	new wage	% wage change	Additional wage bill	Additional wage bill (if youth wage = adult)	Premium over min wage	Pass through	Hours share	Real GDP
Under the minimum wage	9,830	13.54	13.54	0.0%	-	29,103,846			3.2%	3579
Minimum wage	10,626	16.00	16.50	3.1%	5,342,756	5,342,756			3.5%	4571
Up to 5% above	12,024	16.44	16.50	0.3%	672,350	672,350			3.9%	5317
					6,015,106	35,118,953			0.0%	
			78.20		456.55				0.0%	
Spillovers to bottom of income distribution										
6-10% above	11,889	17.25	17.25	0.0%	-	-	7.8%	50%	3.9%	5514
11-15% above	14,049	18.09	18.09	0.0%	-	-	13.1%	50%	4.6%	6834
16-20% above	8,046	18.81	18.81	0.0%	-	-	17.6%	50%	2.6%	4070
21-25% above	12,589	19.52	19.52	0.0%	-	-	22.0%	50%	4.1%	6609
					-	-			0.0%	
					-	-			0.0%	
Total additional wage bill					6,015,106	35,118,953			0.0%	
									0.0%	
More than 25%	226,473	34.52	34.52	34.52					74.1%	210263
Total unadjusted in year to March 2019	305,523	29.22	29.22	29.22	8,927,848,862	8,927,848,862				246757.93
			30.03	30.05	0.1%	0.4%				

Scale to annual (from weekly) and convert to millions

			78.20	456.55		for distribution chart
COE in 2019	127,019	127,019				wage
Impact on COE in 2019	0.1%	0.4%				13.54
						16.50
Operating Surplus in 2019	87,407	87,407				17.25
Impact on operating surplus in 2019	0.1%	0.5%				18.09
						18.81
						19.52

	Nominal
Weighted increase in lower income wages	0.5%
Weighted increase in total wages	0.1%
Total effected hours	79,051
Elasticity of demand	-0.3
Impact on hours	(112.46)
	-0.04%
	-0.03%
Employment in March 2019	2657
Share allocated to employment	50%
Share allocated to hours per person	50%
Impact on average hours per person	-0.02%
Impact on unemployment	-0.02%
Impact on employment	0.4
Change in productivity	0.0%
Net effect on potential	-0.01%
Share to profits	50%
Share to prices	50%

Total_hours_worked (000)

2018Q4	2019Q1	2019Q2	2019Q3	2019Q4	2020Q1	2020Q2	2020Q3	2020Q4	2021Q1	2021Q2	2021Q3	2021Q4	2022Q1	2022Q2	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3	2018Q4	2019Q1	2019Q2	2019Q3	2019Q4	2020Q1
73.93794639	74.41352876	74.76908051	75.07206	75.30528	75.54347	75.75664	75.94906	76.11434	76.26433	76.39597	76.50286	76.69748	76.86501	77.02231	2364.2	2389.725	2404.584	2418.84	2435.821	2450.871	2464.737	2478.787	2489.411	2498.488	2505.427	2511.958
108.3034708	109.0000985	109.5209067	109.9647	110.3063	110.6552	110.9675	111.2493	111.4914	111.7111	111.904	112.0605	112.3456	112.591	112.8214	2555.6	2583.192	2599.263	2614.664	2633.02	2648.747	2664.176	2679.464	2690.948	2700.76	2708.26	2715.32
106.1165738	106.7991349	107.3094268	107.7443	108.079	108.4208	108.7268	109.0029	109.2402	109.4554	109.6444	109.7978	110.0771	110.3175	110.5433	2891.9	2923.123	2941.298	2958.736	2979.508	2997.304	3014.877	3032.063	3045.059	3056.162	3064.649	3072.638
90.80829472	91.39239025	91.8290679	92.20117	92.48761	92.78015	93.04196	93.27828	93.48128	93.66549	93.82717	93.95844	94.19746	94.40323	94.59641	2859.4	2890.272	2908.242	2925.485	2946.023	2963.62	2980.995	2997.988	3010.838	3021.816	3030.208	3038.107
104.0338147	104.7029792	105.2032555	105.6296	105.9577	106.2929	106.5928	106.8635	107.0961	107.3071	107.4924	107.6428	107.9166	108.1523	108.3736	3379	3415.482	3436.718	3457.094	3481.364	3502.158	3522.69	3542.772	3557.957	3570.93	3580.847	3590.181
56.33863239	56.70101276	56.97193318	57.20279	57.3805	57.562	57.72443	57.87104	57.99698	58.11127	58.21158	58.29303	58.44132	58.56898	58.68883	1935.1	1955.992	1968.154	1979.823	1993.722	2005.631	2017.389	2028.889	2037.586	2045.015	2050.694	2056.04
85.39312118	85.94238533	86.35302256	86.70294	86.97229	87.24739	87.49359	87.71581	87.9067	88.07993	88.23197	88.35542	88.58018	88.77368	88.95534	3027.8	3060.49	3079.519	3097.777	3119.525	3138.157	3156.556	3174.55	3188.157	3199.781	3208.668	3217.031
1434.500298	1443.727266	1450.625471	1456.504	1461.028	1465.65	1469.786	1473.519	1476.725	1479.635	1482.19	1484.263	1488.039	1491.29	1494.341	54470.2	55058.29	55400.62	55729.09	56120.33	56455.53	56786.52	57110.23	57355.02	57564.15	57724.01	57874.48
2059.432152	2072.678795	2082.582164	2091.021	2097.517	2104.152	2110.089	2115.449	2120.052	2124.23	2127.897	2130.874	2136.295	2140.961	2145.342	73483.1	74276.46	74738.29	75181.41	75709.21	76161.42	76607.94	77044.64	77374.87	77657	77872.66	78075.64

Real GDP per hour	New hours (nominal)	New hours (real)	
0.36	9830	9829.715292	
0.43	10525	10525.31126	
0.44	12011	12011.48554	
0.46	11889	11888.62529	
0.49	14049	14048.984	
0.51	8046	8045.631529	
0.52	12589	12588.78773	
0.93	226473	226472.6156	
0.81	305411	305411	
	0.81	0.81	Revised productivity
	0.0%	0.0%	

share
3.2%
7.4%
3.9%
4.6%
2.6%
4.1%

($)_Total_earnings_million_(000000)

2020Q2	2020Q3	2020Q4	2021Q1	2021Q2	2021Q3	2021Q4	2022Q1	2022Q2	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3	2018Q4	2019Q1	2019Q2	2019Q3	2019Q4	2020Q1	2020Q2	2020Q3	2020Q4	2021Q1	2021Q2	2021Q3	2021Q4	2022Q1	2022Q2
2517.79	2523.051	2527.515	2531.561	2535.078	2537.845	2543.558	2548.429	2553.006	31514.79	31991.2	32321.44	32749.16	33253.78	33751.44	34230.49	34712.67	35153.25	35577.8	35976.35	36364.29	36736.1	37094.96	37439.14	37774.9	38101.22	38418	38771.37	39116.85	39465.11
2721.624	2727.311	2732.136	2736.51	2740.312	2743.303	2749.478	2754.743	2759.691	40250.7	40859.17	41280.96	41827.24	42471.74	43107.35	43719.2	44335.04	44897.75	45439.98	45949.01	46444.49	46919.37	47377.7	47817.29	48246.12	48662.89	49067.48	49518.81	49960.06	50404.86
3079.772	3086.207	3091.668	3096.616	3100.919	3104.303	3111.291	3117.249	3122.849	46819.86	47527.64	48018.26	48653.7	49403.39	50142.74	50854.44	51570.78	52225.34	52856.07	53448.17	54024.52	54576.89	55110.04	55621.36	56120.18	56604.98	57075.6	57600.59	58113.85	58631.24
3045.16	3051.523	3056.922	3061.815	3066.07	3069.416	3076.326	3082.217	3087.753	48552.61	49286.59	49795.36	50454.32	51231.76	51998.47	52736.51	53479.36	54158.14	54812.21	55426.23	56023.9	56596.72	57149.6	57679.85	58197.12	58699.86	59187.9	59732.32	60264.58	60801.11
3598.516	3606.035	3612.416	3618.198	3623.225	3627.179	3635.345	3642.306	3648.849	60179.99	61089.74	61720.36	62537.12	63500.74	64451.06	65365.84	66286.6	67127.93	67938.64	68699.7	69440.51	70150.5	70835.78	71493.02	72134.17	72757.3	73362.22	74037.02	74696.74	75361.76
2060.813	2065.12	2068.773	2072.085	2074.964	2077.228	2081.905	2085.891	2089.638	35838.05	36379.82	36755.36	37241.76	37815.61	38381.53	38926.3	39474.63	39975.65	40458.44	40911.66	41352.82	41775.64	42183.73	42575.12	42956.94	43328.02	43688.26	44090.11	44482.98	44879.02
3224.5	3231.238	3236.955	3242.136	3246.641	3250.185	3257.501	3263.739	3269.602	58194.32	59074.05	59683.86	60473.67	61405.49	62324.46	63209.06	64099.43	64913	65696.96	66432.91	67149.28	67835.85	68498.51	69134.06	69754.06	70356.63	70941.59	71594.12	72232.07	72875.16
58008.85	58130.06	58232.91	58326.12	58407.16	58470.9	58602.53	58714.75	58820.22	1851442	1879431	1898832	1923959	1953605	1982842	2010985	2039312	2065196	2090137	2113552	2136343	2158186	2179268	2199368	2219213	2238384	2256994	2277755	2298051	2318510
78256.91	78420.44	78559.19	78684.93	78794.26	78880.26	79057.83	79209.22	79351.5	2172792	2205639	2228407	2257896	2292688	2326999	2360027	2393271	2423647	2452918	2480396	2507142	2532777	2557519	2581248	2604397	2626895	2648735	2673099	2696918	2720929

($)_Mean_hourly_earnings

2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3	2018Q4	2019Q1	2019Q2	2019Q3	2019Q4	2020Q1	2020Q2	2020Q3	2020Q4	2021Q1	2021Q2	2021Q3	2021Q4	2022Q1	2022Q2
13.33	13.38698	13.44159	13.5392	13.65198	13.77401	13.88809	14.00389	14.12111	14.23973	14.35937	14.47647	14.59061	14.70242	14.81263	14.92159	15.0296	15.13804	15.24297	15.3494	15.45829
15.75	15.81732	15.88185	15.99718	16.13043	16.27462	16.40941	16.54624	16.68473	16.82489	16.96625	17.10461	17.23947	17.37158	17.50179	17.63053	17.75816	17.88628	18.01026	18.13601	18.26467
16.19	16.2592	16.32554	16.44408	16.58106	16.72928	16.86783	17.00848	17.15085	17.29492	17.44022	17.58246	17.72108	17.85688	17.99073	18.12307	18.25426	18.38596	18.5134	18.64267	18.77492
16.98	17.05258	17.12215	17.24648	17.39014	17.54559	17.69091	17.83842	17.98773	18.13883	18.29123	18.4404	18.58579	18.72822	18.8686	19.00739	19.14499	19.28311	19.41677	19.55235	19.69105
17.81	17.88613	17.9591	18.08951	18.24019	18.40324	18.55566	18.71038	18.86699	19.02547	19.18532	19.34179	19.49429	19.64367	19.79092	19.93649	20.08081	20.22569	20.36589	20.50809	20.65757
18.52	18.59916	18.67504	18.81065	18.96734	19.13689	19.29539	19.45627	19.61913	19.78393	19.95015	20.11285	20.27143	20.42677	20.57989	20.73127	20.88134	21.032	21.17778	21.32565	21.47693
19.22	19.30215	19.3809	19.52163	19.68425	19.86021	20.02469	20.19166	20.36067	20.5317	20.70421	20.87306	21.03763	21.19884	21.35774	21.51484	21.67059	21.82694	21.97823	22.13169	22.2887
33.99	34.13529	34.27455	34.52343	34.81101	35.12219	35.41307	35.70835	36.00724	36.30971	36.61477	36.91338	37.20443	37.48953	37.77054	38.04836	38.3238	38.6003	38.86785	39.13924	39.4169
28.77	28.89298	29.01085	29.22151	29.46492	29.72831	29.97453	30.22446	30.47744	30.73346	30.99168	31.24442	31.49077	31.73209	31.96994	32.2051	32.43824	32.67227	32.89874	33.12845	33.36346

($)_Median_hourly_earnings

2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3	2018Q4	2019Q1	2019Q2
14.38	14.44147	14.50038	14.60568	14.72734	14.85899	14.98205	15.10698	15.23343
15.75	15.81732	15.88185	15.99718	16.13043	16.27462	16.40941	16.54624	16.68473
16.1	16.16882	16.23478	16.35267	16.48889	16.63628	16.77407	16.91393	17.0555
17	17.07267	17.14232	17.26679	17.41063	17.56626	17.71175	17.85943	18.00892
18	18.07694	18.15069	18.28249	18.43478	18.59957	18.75361	18.90998	19.06827
18.5	18.57908	18.65488	18.79033	18.94686	19.11622	19.27455	19.43526	19.59794
19.18	19.26198	19.34057	19.48101	19.64328	19.81887	19.98302	20.14964	20.3183
29	29.12396	29.24278	29.45512	29.70048	29.96597	30.21416	30.46608	30.72109
24.29	24.39383	24.49335	24.6712	24.87671	25.09909	25.30696	25.51797	25.73156

0.134396
0.103566
0.052222
0.003186

2019Q3	2019Q4	2020Q1	2020Q2	2020Q3	2020Q4	2021Q1	2021Q2	2021Q3	2021Q4	2022Q1	2022Q2
15.36139	15.49045	15.61678	15.73991	15.86053	15.97942	16.09695	16.21348	16.33046	16.44365	16.55847	16.67593
16.82489	16.96625	17.10461	17.23947	17.37158	17.50179	17.63053	17.75816	17.88628	18.01026	18.13601	18.26467
17.19877	17.34327	17.48471	17.62257	17.75762	17.89072	18.02232	18.15278	18.28375	18.41049	18.53904	18.67055
18.1602	18.31277	18.46212	18.60769	18.75028	18.89082	19.02978	19.16754	19.30583	19.43964	19.57538	19.71425
19.22844	19.39	19.54813	19.70226	19.85324	20.00205	20.14918	20.29504	20.44146	20.58315	20.72687	20.87391
19.76257	19.92861	20.09113	20.24954	20.40471	20.55766	20.70888	20.85879	21.00928	21.15491	21.30262	21.45374
20.48897	20.66112	20.82962	20.99385	21.15473	21.3133	21.47007	21.62549	21.78152	21.93249	22.08563	22.24231
30.97916	31.23944	31.49421	31.74252	31.98577	32.22552	32.46256	32.69756	32.93347	33.16175	33.39329	33.63019
25.94771	26.16572	26.37911	26.5871	26.79084	26.99166	27.1902	27.38703	27.58462	27.77582	27.96976	28.16818

Minimum_wage	sex	As at June 2017 Total_employees_000	Total_hours_worked_(000)	($)_Total_earnings_million_(000000)	($)_Mean_hourly_earnings	($)_Median_hourly_earnings	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3	Total_employees_000 2018Q4
Under the minimum wage	Total	71	2364.2	31.4	13.33	14.38	71	71.4615	71.96173	72.37685	72.95777	73.44989771	73.93794639
Minimum wage	Total	104	2555.6	40.2	15.75	15.75	104	104.676	105.4087	106.0168	106.8677	107.5885826	108.3034708
Up to 5% above	Total	101.9	2891.9	46.8	16.19	16.1	101.9	102.5624	103.2803	103.8761	104.7098	105.4161208	106.1165738
6-10% above	Total	87.2	2859.4	48.6	16.98	17	87.2	87.7668	88.38117	88.89101	89.60448	90.20888846	90.80829472
11-15% above	Total	99.9	3379	60.2	17.81	18	99.9	100.5494	101.2532	101.8373	102.6547	103.3471096	104.0338147
16-20% above	Total	54.1	1935.1	35.8	18.52	18.5	54.1	54.45165	54.83281	55.14912	55.59177	55.96675305	56.33863239
21-25% above	Total	82	3027.8	58.2	19.22	19.18	82	82.533	83.11074	83.59017	84.26109	84.82945933	85.39312118
More than 25%	Total	1377.5	54470.2	1858.4	33.99	29	1377.5	1386.454	1396.159	1404.213	1415.484	1425.031466	1434.500298
Total	Total	1977.6	73483.1	2179.6	28.77	24.29	1977.6	1990.454	2004.388	2015.95	2032.131	2045.838278	2059.432152

Current share at or under minimum wage	employees	8.8%	0.214957524					
	hours	6.7%			16.5	17.7	18.8	20

For year to March 2020 ($17.7)
Total hours worked (HYEFU prelim)   361,256   # hours worked each week for year ending Mar 2020
Share that are employed   86%

Weighted by earnings

Hours of those under min wage	hours (March yr 2020)	est wage @2019q1	new wage	% wage change	Additional wage bill	Additional wage bill (if youth wage = adult)	Premium over min wage	Pass through	Hours share	Real GDP	Real GDP per hour
Under the minimum wage	10,005	14.00	14.16	1.1%	1,561,891	36,980,598			3.2%	3678	0.37
Minimum wage	10,815	16.55	17.70	7.0%	12,478,294	12,478,294			3.5%	4698	0.43
Up to 5% above	12,239	17.01	17.70	4.1%	8,463,177	8,463,177			3.9%	5465	0.45
					22,503,362	57,922,069			0.0%		
					292.54	752.99			0.0%		
Spillovers to bottom of income distribution									0.0%		
6-10% above	12,101	17.84	18.39	3.1%	6,688,508	6,688,508	7.8%	50%	3.9%	5667	0.47
11-15% above	14,300	18.71	18.86	0.8%	2,104,169	2,104,169	13.1%	50%	4.6%	7024	0.49
16-20% above	8,189	19.46	19.46	0.0%	-	-	17.6%	50%	2.6%	4183	0.51
21-25% above	12,814	20.19	20.19	0.0%	-	-	22.0%	50%	4.1%	6793	0.53
					8,792,677	8,792,677			0.0%		
					114.30	114.30			0.0%		
Total additional wage bill					31,296,039	66,714,746			0.0%		
									0.0%		
More than 25%	230,518	35.71	35.71						74.1%	216103	0.94
									0.0%		
Total unadjusted in year to March 2020	310,980	30.22	30.22		9,399,206,817	9,399,206,817				253611.36	0.82
		31.06	31.16		0.3%	0.7%					

Scale to annual (from weekly) and convert to millions   406.85   867.29

for distribution chart

							wage	share
COE in 2020					133,675	133,675		
Impact on COE in 2020					0.3%	0.6%	14.16	3.2%
							17.70	7.4%
Operating Surplus in 2020					92,220	92,220	18.39	3.9%
Impact on operating surplus in 2020					0.4%	0.9%	18.86	4.6%
							19.46	2.6%
							20.19	4.1%

	Nominal
Weighted increase in lower income wages	2.3%
Weighted increase in total wages	0.6%
Total effected hours	80,463
Elasticity of demand	-0.3
Impact on hours	(555.20)
	-0.18%
	-0.15%
Employment in March 2020	2697
Share allocated to employment	50%
Share allocated to hours per person	50%
Impact on average hours per person	-0.08%
Impact on unemployment	-0.08%
Impact on employment	2.1
Change in productivity	0.1%
Net effect on potential	-0.07%
Share to profits	50%
Share to prices	50%

2019Q1	2019Q2	2019Q3	2019Q4	2020Q1	2020Q2	2020Q3	2020Q4	2021Q1	2021Q2	2021Q3	2021Q4	2022Q1	2022Q2
74.41352876	74.76908051	75.07206	75.30528	75.54347	75.75664	75.94906	76.11434	76.26433	76.39597	76.50286	76.69748	76.86501	77.02231
109.0000985	109.5209067	109.9647	110.3063	110.6552	110.9675	111.2493	111.4914	111.7111	111.904	112.0605	112.3456	112.591	112.8214
106.7991349	107.3094268	107.7443	108.079	108.4208	108.7268	109.0029	109.2402	109.4554	109.6444	109.7978	110.0771	110.3175	110.5433
91.39239025	91.8290679	92.20117	92.48761	92.78015	93.04196	93.27828	93.48128	93.66549	93.82717	93.95844	94.19746	94.40323	94.59641
104.7029792	105.2032555	105.6296	105.9577	106.2929	106.5928	106.8635	107.0961	107.3071	107.4924	107.6428	107.9166	108.1523	108.3736
56.70101276	56.97193318	57.20279	57.3805	57.562	57.72443	57.87104	57.99698	58.11127	58.21158	58.29303	58.44132	58.56898	58.68883
85.94238533	86.35302256	86.70294	86.97229	87.24739	87.49359	87.71581	87.9067	88.07993	88.23197	88.35542	88.58018	88.77368	88.95534
1443.727266	1450.625471	1456.504	1461.028	1465.65	1469.786	1473.519	1476.725	1479.635	1482.19	1484.263	1488.039	1491.29	1494.341
2072.678795	2082.582164	2091.021	2097.517	2104.152	2110.089	2115.449	2120.052	2124.23	2127.897	2130.874	2136.295	2140.961	2145.342

Total_hours_worked_(000)

2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3	2018Q4	2019Q1	2019Q2	2019Q3	2019Q4	2020Q1	2020Q2	2020Q3	2020Q4	2021Q1
2364.2	2389.725	2404.584	2418.84	2435.821	2450.371	2464.737	2478.787	2489.411	2498.488	2505.427	2511.958	2517.79	2523.051	2527.515	2531.561
2555.6	2583.192	2599.253	2614.664	2633.02	2648.747	2664.276	2679.464	2690.948	2700.76	2708.26	2715.32	2721.624	2727.311	2732.136	2736.51
2891.9	2923.123	2941.298	2958.736	2979.508	2997.304	3014.877	3032.063	3045.059	3056.162	3064.649	3072.638	3079.772	3086.207	3091.668	3096.616
2859.4	2890.272	2908.242	2925.485	2946.023	2963.62	2980.995	2997.988	3010.838	3021.816	3030.208	3038.107	3045.16	3051.523	3056.922	3061.815
3379	3415.482	3436.718	3457.094	3481.364	3502.158	3522.69	3542.772	3557.957	3570.93	3580.847	3590.181	3598.516	3606.035	3612.416	3618.198
1935.1	1955.992	1968.154	1979.823	1993.722	2005.631	2017.389	2028.889	2037.586	2045.015	2050.694	2056.04	2060.813	2065.12	2068.773	2072.085
3027.8	3060.49	3079.519	3097.777	3119.525	3138.157	3156.556	3174.55	3188.157	3199.781	3208.668	3217.031	3224.5	3231.238	3236.955	3242.136
54470.2	55058.29	55400.62	55729.09	56120.33	56455.53	56786.52	57110.23	57355.02	57564.15	57724.01	57874.48	58008.85	58130.06	58232.91	58326.12
73483.1	74276.46	74738.29	75181.41	75709.21	76161.42	76607.94	77044.64	77374.87	77657	77872.66	78075.64	78256.91	78420.44	78559.19	78684.93

New hours (nominal)	New hours (real)	
9972	9971.824671	
10589	10589.04434	
12089	12089.23291	
11988	11988.48389	
14266	14266.17578	
8189	8189.33506	
12814	12813.63686	
230518	230517.6573	
310425	310425	
0.82	0.82	Revised productivity
0.1%	0.1%	

($)_Total_earnings_million_(000000)																										($)_Mean_hourly_earnings					
2021Q2	2021Q3	2021Q4	2022Q1	2022Q2	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3	2018Q4	2019Q1	2019Q2	2019Q3	2019Q4	2020Q1	2020Q2	2020Q3	2020Q4	2021Q1	2021Q2	2021Q3	2021Q4	2022Q1	2022Q2	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3
2535.078	2537.845	2543.558	2548.429	2553.006	31514.79	31991.2	32321.44	32749.16	33253.78	33751.44	34230.49	34712.67	35153.25	35577.8	35976.35	36364.29	36736.1	37094.96	37439.14	37774.9	38101.22	38418	38771.37	39116.85	39465.11	13.33	13.38698	13.44159	13.5392	13.65198	13.77401
2740.312	2743.303	2749.478	2754.743	2759.691	40250.7	40859.17	41280.96	41827.24	42471.74	43107.35	43719.2	44335.04	44897.75	45439.98	45949.01	46444.49	46919.37	47377.7	47817.29	48246.12	48662.89	49067.48	49518.81	49960.06	50404.86	15.75	15.81732	15.88185	15.99718	16.13043	16.27462
3100.919	3104.303	3111.291	3117.249	3122.849	46819.86	47527.64	48018.26	48653.7	49403.39	50142.74	50854.44	51570.78	52225.34	52856.07	53448.17	54024.52	54576.89	55110.04	55621.36	56120.18	56604.98	57075.6	57600.59	58113.85	58631.24	16.19	16.2592	16.32554	16.44408	16.58106	16.72928
3623.225	3627.179	3635.345	3642.306	3648.849	60179.99	61089.74	61720.36	62537.12	63500.74	64451.06	65365.84	66286.6	67127.93	67938.64	68699.7	69440.51	70150.5	70835.78	71493.02	72134.17	72757.3	73362.22	74037.02	74696.74	75361.76	17.81	17.88613	17.9591	18.08951	18.24019	18.40324
2074.964	2077.228	2081.905	2085.891	2089.638	35838.05	36379.82	36755.36	37241.76	37815.61	38381.53	38926.3	39474.63	39975.65	40458.44	40911.66	41352.82	41775.64	42183.73	42575.12	42956.94	43328.02	43688.26	44090.11	44482.98	44879.02	18.52	18.59916	18.67504	18.81065	18.96734	19.13689
3246.641	3250.185	3257.501	3263.739	3269.602	58194.32	59074.05	59683.86	60473.67	61405.49	62324.46	63209.06	64099.43	64913	65696.96	66432.91	67149.28	67835.85	68498.51	69134.06	69754.06	70356.63	70941.59	71594.12	72232.07	72875.16	19.22	19.30215	19.3809	19.52163	19.68425	19.86021
58407.16	58470.9	58602.53	58714.75	58820.22	1851442	1879431	1898832	1923959	1953605	1982842	2010985	2039312	2065196	2090137	2113552	2136343	2158186	2179268	2199488	2219213	2238384	2256994	2277755	2298051	2318510	33.99	34.13529	34.27455	34.52343	34.81101	35.12219
78794.26	78880.26	79057.83	79209.22	79351.5	2172792	2205639	2228407	2257896	2292688	2326999	2360027	2393271	2423647	2452918	2480396	2507142	2532777	2557519	2581248	2604397	2626895	2648735	2673099	2696918	2720929	28.77	28.89298	29.01085	29.22151	29.46492	29.72831

($)_Median_hourly_earnings

2018Q4	2019Q1	2019Q2	2019Q3	2019Q4	2020Q1	2020Q2	2020Q3	2020Q4	2021Q1	2021Q2	2021Q3	2021Q4	2022Q1	2022Q2
13.88809	14.00389	14.12111	14.23973	14.35937	14.47647	14.59061	14.70242	14.81263	14.92159	15.0296	15.13804	15.24297	15.3494	15.45829
16.40941	16.54624	16.68473	16.82489	16.96625	17.10461	17.23947	17.37158	17.50179	17.63053	17.75816	17.88628	18.01026	18.13601	18.26467
16.86783	17.00848	17.15085	17.29492	17.44022	17.58246	17.72108	17.85688	17.99073	18.12307	18.25426	18.38596	18.5134	18.64267	18.77492
17.69091	17.83842	17.98773	18.13883	18.29123	18.4404	18.58579	18.72822	18.8686	19.00739	19.14499	19.28311	19.41677	19.55235	19.69105
18.55566	18.71038	18.86699	19.02547	19.18532	19.34179	19.49429	19.64367	19.79092	19.93649	20.08081	20.22569	20.36589	20.50809	20.65357
19.29539	19.45627	19.61913	19.78393	19.95015	20.11285	20.27143	20.42677	20.57989	20.73127	20.88134	21.032	21.17278	21.32565	21.47693
20.02469	20.19166	20.36067	20.5317	20.70421	20.87306	21.03763	21.19884	21.35774	21.51484	21.67059	21.82694	21.97823	22.13169	22.2887
35.41307	35.70835	36.00724	36.30971	36.61477	36.91338	37.20443	37.48953	37.77054	38.04836	38.3238	38.6003	38.86785	39.13924	39.4169
29.97453	30.22446	30.47744	30.73346	30.99168	31.24442	31.49077	31.73209	31.96994	32.2051	32.43824	32.67227	32.89874	33.12845	33.36346

2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3	2018Q4	2019Q1	2019Q2	2019Q3	2019Q4	2020Q1	2020Q2	2020Q3	2020Q4	2021Q1	2021Q2
14.38	14.44147	14.50038	14.60568	14.72734	14.85899	14.98205	15.10698	15.23343	15.36139	15.49045	15.61678	15.73991	15.86053	15.97942	16.09695	16.21348
15.75	15.81732	15.88185	15.99718	16.13043	16.27462	16.40941	16.54624	16.68473	16.82489	16.96625	17.10461	17.23947	17.37158	17.50179	17.63053	17.75816
16.1	16.16882	16.23478	16.35267	16.48889	16.63628	16.77407	16.91393	17.0555	17.19877	17.34327	17.48471	17.62257	17.75762	17.89072	18.02232	18.15278
17	17.07267	17.14232	17.26679	17.41063	17.56626	17.71175	17.85943	18.00892	18.1602	18.31277	18.46212	18.60769	18.75028	18.89082	19.02978	19.16754
18	18.07694	18.15069	18.28249	18.43478	18.59957	18.75361	18.90998	19.06827	19.22844	19.39	19.54813	19.70226	19.85324	20.00205	20.14918	20.29504
18.5	18.57908	18.65488	18.79033	18.94686	19.11622	19.27455	19.43526	19.59794	19.76257	19.92861	20.09113	20.24954	20.40471	20.55766	20.70888	20.85879
19.18	19.26198	19.34057	19.48101	19.64328	19.81887	19.98302	20.14964	20.3183	20.48897	20.66112	20.82962	20.99385	21.15473	21.3133	21.47007	21.62549
29	29.12396	29.24278	29.45512	29.70048	29.96597	30.21416	30.46608	30.72109	30.97916	31.23944	31.49421	31.74252	31.98577	32.22552	32.46256	32.69756
24.29	24.39383	24.49335	24.6712	24.87671	25.09909	25.30696	25.51797	25.73156	25.94771	26.16572	26.37911	26.5871	26.79084	26.99166	27.1902	27.38703

0.134396
0.103566
0.052222
0.003186

2021Q3	2021Q4	2022Q1	2022Q2
16.33046	16.44365	16.55847	16.67593
17.88628	18.01026	18.13601	18.26467
18.28375	18.41049	18.53904	18.67055
19.30583	19.43964	19.57538	19.71425
20.44146	20.58315	20.72687	20.87391
21.00928	21.15491	21.30262	21.45374
21.78152	21.93249	22.08563	22.24231
32.93347	33.16175	33.39329	33.63019
27.58462	27.77582	27.96976	28.16818

		As at June 2017								Total_employees_000			
Minimum_wage	sex	Total_employees_000	Total_hours_worked_(000)	($)_Total_earnings_million_(000000)	($)_Mean_hourly_earnings	($)_Median_hourly_earnings 2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3	2018Q4	
Under the minimum wage	Total	71	2364.2	31.4	13.33	14.38	71	71.4615	71.96173	72.37685	72.95777	73.44989771	73.93794639
Minimum wage	Total	104	2555.6	40.2	15.75	15.75	104	104.676	105.4087	106.0168	106.8677	107.5885826	108.3034708
Up to 5% above	Total	101.9	2891.9	46.8	16.19	16.1	101.9	102.5624	103.2803	103.8761	104.7098	105.4161208	106.1165738
6-10% above	Total	87.2	2859.4	48.6	16.98	17	87.2	87.7668	88.38117	88.89101	89.60448	90.20888846	90.80829472
11-15% above	Total	99.9	3379	60.2	17.81	18	99.9	100.5494	101.2532	101.8373	102.6547	103.3471096	104.0338147
16-20% above	Total	54.1	1935.1	35.8	18.52	18.5	54.1	54.45165	54.83281	55.14912	55.59177	55.96675305	56.33863239
21-25% above	Total	82	3027.8	58.2	19.22	19.18	82	82.533	83.11074	83.59017	84.26109	84.82945933	85.39312118
More than 25%	Total	1377.5	54470.2	1858.4	33.99	29	1377.5	1386.454	1396.159	1404.213	1415.484	1425.031466	1434.500298
Total	Total	1977.6	73483.1	2179.6	28.77	24.29	1977.6	1990.454	2004.388	2015.95	2032.131	2045.838278	2059.432152

Current share at or under minimum wage	employees	8.8%	0.214957524			
	hours	6.7%		16.5	17.7	18.8	20

For year to March 2021 ($18.8)
Total hours worked (HYEFU prelim) 364,673 # hours worked each week for year ending Mar 2021
Share that are employed 86%

Weighted by earnings

Hours of those under min wage	hours (March yr 2021)	est wage @2020q1	new wage	% wage change	Additional wage bill	Additional wage bill (if youth wage = adult)	Premium over min wage	Pass through	Hours share	Real GDP	Real GDP per hour
Under the minimum wage	10,100	14.48	15.04	3.9%	5,691,558	43,667,242			3.2%	3757	0.37
Minimum wage	10,918	17.10	18.80	9.9%	18,509,537	18,509,537			3.5%	4798	0.44
Up to 5% above	12,354	17.58	18.80	6.9%	15,041,870	15,041,870			3.9%	5581	0.45
6-10% above	12,215	18.44	18.80	2.0%	4,392,658	4,392,658			3.9%	5788	0.47
					43,635,624	81,611,308			0.0%		
					567.26	1,060.95			0.0%		
Spillovers to bottom of income distribution									0.0%		
11-15% above	14,435	19.34	20.03	3.6%	9,926,684	9,926,684	13.1%	50%	4.6%	7174	0.50
16-20% above	8,267	20.11	20.45	1.7%	2,813,642	2,813,642	17.6%	50%	2.6%	4272	0.52
21-25% above	12,935	20.87	20.87	0.0%	-	-	22.0%	50%	4.1%	6937	0.54
					12,740,326	12,740,326			0.0%		
					165.62	165.62			0.0%		
Total additional wage bill					56,375,950	94,351,634			0.0%		
									0.0%		
More than 25%	232,698	36.91	36.91						74.1%	220705	0.95
									0.0%		
Total unadjusted in year to March 2021	313,921	31.24	31.24		9,808,295,566	9,808,295,566				259011.82	0.83
		32.11	32.29		0.6%	1.0%					

Scale to annual (from weekly) and convert to millions 732.89 1,226.57

for distribution chart

COE in 2021					139,256	139,256	wage	share
Impact on COE in 2021					0.5%	0.9%	15.04	3.2%
							18.80	11.3%
Operating Surplus in 2021					96,414	96,414	20.03	4.6%
Impact on operating surplus in 2021					0.8%	1.3%	20.45	2.6%
							20.87	4.1%

	Nominal
Weighted increase in lower income wages	4.0%
Weighted increase in total wages	1.0%
Total effected hours	81,224
Elasticity of demand	-0.3
Impact on hours	(966.64)
	-0.31%
	-0.27%
Employment in March 2021	2723
Share allocated to employment	50%
Share allocated to hours per person	50%
Impact on average hours per person	-0.13%
Impact on unemployment	-0.13%
Impact on employment	3.6
Change in productivity	0.1%
Net effect on potential	-0.12%
Share to profits	50%
Share to prices	50%

Total_hours_worked_(000)

2019Q1	2019Q2	2019Q3	2019Q4	2020Q1	2020Q2	2020Q3	2020Q4	2021Q1	2021Q2	2021Q3	2021Q4	2022Q1	2022Q2	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3	2018Q4	2019Q1	2019Q2	2019Q3	2019Q4	2020Q1	2020Q2	2020Q3	2020Q4	2021Q1
74.41352876	74.76908051	75.07206	75.30528	75.54347	75.75664	75.94906	76.11434	76.26433	76.39597	76.50286	76.69748	76.86501	77.02231	2364.2	2389.725	2404.584	2418.84	2435.821	2450.371	2464.737	2478.787	2489.411	2498.488	2505.427	2511.958	2517.79	2523.051	2527.515	2531.561
109.0000985	109.5209067	109.9647	110.3063	110.6552	110.9675	111.2493	111.4914	111.7111	111.904	112.0605	112.3456	112.591	112.8214	2555.6	2583.192	2599.253	2614.664	2633.02	2648.747	2664.276	2679.464	2690.948	2700.76	2708.26	2715.32	2721.624	2727.311	2732.136	2736.51
106.7991349	107.3094268	107.7443	108.079	108.4208	108.7268	109.0029	109.2402	109.4554	109.6444	109.7978	110.0771	110.3175	110.5433	2891.9	2923.123	2941.298	2958.736	2979.508	2997.304	3014.877	3032.063	3045.059	3056.162	3064.649	3072.638	3079.772	3086.207	3091.668	3096.616
91.39239025	91.8290679	92.20117	92.48761	92.78015	93.04196	93.27828	93.48128	93.66549	93.82717	93.95844	94.19746	94.40323	94.59641	2859.4	2890.272	2908.242	2925.485	2946.023	2963.62	2980.995	2997.988	3010.838	3021.816	3030.208	3038.107	3045.16	3051.523	3056.922	3061.815
104.7029792	105.2032555	105.6296	105.9577	106.2929	106.5928	106.8635	107.0961	107.3071	107.4924	107.6428	107.9166	108.1523	108.3736	3379	3415.482	3436.718	3457.094	3481.364	3502.158	3522.69	3542.772	3557.957	3570.93	3580.847	3590.181	3598.516	3606.035	3612.416	3618.198
56.70101276	56.97193318	57.20279	57.3805	57.562	57.72443	57.87104	57.99698	58.11127	58.21158	58.29303	58.44132	58.56898	58.68883	1935.1	1955.992	1968.154	1979.823	1993.722	2005.631	2017.389	2028.889	2037.586	2045.015	2050.694	2056.04	2060.813	2065.12	2068.773	2072.085
85.94238533	86.35302256	86.70294	86.97229	87.24739	87.49359	87.71581	87.9067	88.07993	88.23197	88.35542	88.58018	88.77368	88.95534	3027.8	3060.49	3079.519	3097.777	3119.525	3138.157	3156.556	3174.55	3188.157	3199.781	3208.668	3217.031	3224.5	3231.238	3236.955	3242.136
1443.727266	1450.625471	1456.504	1461.028	1465.65	1469.786	1473.519	1476.725	1479.635	1482.19	1484.263	1488.039	1491.29	1494.341	54470.2	55058.29	55400.62	55729.09	56120.33	56455.53	56786.52	57110.23	57355.02	57564.15	57724.01	57874.48	58008.85	58130.06	58232.91	58326.12
2072.678795	2082.582164	2091.021	2097.517	2104.152	2110.089	2115.449	2120.052	2124.23	2127.897	2130.874	2136.295	2140.961	2145.342	73483.1	74276.46	74738.29	75181.41	75709.21	76161.42	76607.94	77044.64	77374.87	77657	77872.66	78075.64	78256.91	78420.44	78559.19	78684.93

New hours (nominal)	New hours (real)	
9982	9981.968222	
10593	10592.93993	
12098	12097.61095	
12144	12143.95907	
14281	14281.19711	
8225	8224.823218	
12935	12934.8302	
232698	232697.9284	
312955	312955	
0.83	0.83	Revised productivity
0.1%	0.1%	

($)_Total_earnings_million_(000000)

2021Q2	2021Q3	2021Q4	2022Q1	2022Q2	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3	2018Q4	2019Q1	2019Q2	2019Q3	2019Q4	2020Q1	2020Q2	2020Q3	2020Q4	2021Q1	2021Q2	2021Q3	2021Q4	2022Q1	2022Q2
2535.078	2537.845	2543.558	2548.429	2553.006	31514.79	31991.2	32321.44	32749.16	33253.78	33751.44	34230.49	34712.67	35153.25	35577.8	35976.35	36364.29	36736.1	37094.96	37439.14	37774.9	38101.22	38418	38771.37	39116.85	39465.11
2740.312	2743.303	2749.478	2754.743	2759.691	40250.7	40859.17	41280.96	41827.24	42471.74	43107.35	43719.2	44335.04	44897.75	45439.98	45949.01	46444.49	46919.37	47377.7	47817.29	48246.12	48662.89	49067.48	49518.81	49960.06	50404.86
3100.919	3104.303	3111.291	3117.249	3122.849	46819.86	47527.64	48018.26	48653.7	49403.39	50142.74	50854.44	51570.78	52225.34	52856.07	53448.17	54024.52	54576.89	55110.04	55621.36	56120.18	56604.98	57075.6	57600.59	58113.85	58631.24
3623.225	3627.179	3635.345	3642.306	3648.849	60179.99	61089.74	61720.36	62537.12	63500.74	64451.06	65365.84	66286.6	67127.93	67938.64	68699.7	69440.51	70150.5	70835.78	71493.02	72134.17	72757.3	73362.22	74037.02	74696.74	75361.76
2074.964	2077.228	2081.905	2085.891	2089.638	35838.05	36379.82	36755.36	37241.76	37815.61	38381.53	38926.3	39474.63	39975.65	40458.44	40911.66	41352.82	41775.64	42183.73	42575.12	42956.94	43328.02	43688.26	44090.11	44482.98	44879.02
3246.641	3250.185	3257.501	3263.739	3269.602	58194.32	59074.05	59683.86	60473.67	61405.49	62324.46	63209.06	64099.43	64913	65696.96	66432.91	67149.28	67835.85	68498.51	69134.06	69754.06	70356.63	70941.59	71594.12	72232.07	72875.16
58407.16	58470.9	58602.53	58714.75	58820.22	1851442	1879431	1898832	1923959	1953605	1982842	2010985	2039312	2065196	2090137	2113552	2136343	2158186	2179268	2199488	2219213	2238384	2256994	2277755	2298051	2318510
78794.26	78880.26	79057.83	79209.22	79351.5	2172792	2205639	2228407	2257896	2292688	2326999	2360027	2393271	2423647	2452918	2480396	2507142	2532777	2557519	2581248	2604397	2626895	2648735	2673099	2696918	2720929

($)_Mean_hourly_earnings

2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3
13.33	13.38698	13.44159	13.5392	13.65198	13.77401
15.75	15.81732	15.88185	15.99718	16.13043	16.27462
16.19	16.2592	16.32554	16.44408	16.58106	16.72928
17.81	17.88613	17.9591	18.08951	18.24019	18.40324
18.52	18.59916	18.67504	18.81065	18.96734	19.13689
19.22	19.30215	19.3809	19.52163	19.68425	19.86021
33.99	34.13529	34.27455	34.52343	34.81101	35.12219
28.77	28.89298	29.01085	29.22151	29.46492	29.72831

($)_Median_hourly_earnings

2018Q4	2019Q1	2019Q2	2019Q3	2019Q4	2020Q1	2020Q2	2020Q3	2020Q4	2021Q1	2021Q2	2021Q3	2021Q4	2022Q1	2022Q2	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3	2018Q4	2019Q1	2019Q2	2019Q3	2019Q4	2020Q1	2020Q2	2020Q3	2020Q4	2021Q1	2021Q2
13.88809	14.00389	14.12111	14.23973	14.35937	14.47647	14.59061	14.70242	14.81263	14.92159	15.0296	15.13804	15.24297	15.3494	15.45829	14.38	14.44147	14.50038	14.60568	14.72734	14.85899	14.98205	15.10698	15.23343	15.36139	15.49045	15.61678	15.73991	15.86053	15.97942	16.09695	16.21348
16.40941	16.54624	16.68473	16.82489	16.96625	17.10461	17.23947	17.37158	17.50179	17.63053	17.75816	17.88628	18.01026	18.13601	18.26467	15.75	15.81732	15.88185	15.99718	16.13043	16.27462	16.40941	16.54624	16.68473	16.82489	16.96625	17.10461	17.23947	17.37158	17.50179	17.63053	17.75816
16.86783	17.00848	17.15085	17.29492	17.44022	17.58246	17.72108	17.85688	17.99073	18.12307	18.25426	18.38596	18.5134	18.64267	18.77492	16.1	16.16882	16.23478	16.35267	16.48889	16.63628	16.77407	16.91393	17.0555	17.19877	17.34327	17.48471	17.62257	17.75762	17.89072	18.02232	18.15278
17.69091	17.83842	17.98773	18.13883	18.29123	18.4404	18.58579	18.72822	18.8686	19.00739	19.14499	19.28311	19.41677	19.55235	19.69105	17	17.07267	17.14232	17.26679	17.41063	17.56626	17.71175	17.85943	18.00892	18.1602	18.31277	18.46212	18.60769	18.75028	18.89082	19.02978	19.16754
18.55566	18.71038	18.86699	19.02547	19.18532	19.34179	19.49429	19.64367	19.79092	19.93649	20.08081	20.22569	20.36589	20.50809	20.65357	18	18.07694	18.15069	18.28249	18.43478	18.59957	18.75361	18.90998	19.06827	19.22844	19.39	19.54813	19.70226	19.85324	20.00205	20.14918	20.29504
19.29539	19.45627	19.61913	19.78393	19.95015	20.11285	20.27143	20.42677	20.57989	20.73127	20.88134	21.032	21.17278	21.32565	21.47693	18.5	18.57908	18.65488	18.79033	18.94686	19.11622	19.27455	19.43526	19.59794	19.76257	19.92861	20.09113	20.24954	20.40471	20.55766	20.70888	20.85879
20.02469	20.19166	20.36067	20.5317	20.70421	20.87306	21.03763	21.19884	21.35774	21.51484	21.67059	21.82694	21.97823	22.13169	22.2887	19.18	19.26198	19.34057	19.48101	19.64328	19.81887	19.98302	20.14964	20.3183	20.48897	20.66112	20.82962	20.99385	21.15473	21.3133	21.47007	21.62549
35.41307	35.70835	36.00724	36.30971	36.61477	36.91338	37.20443	37.48953	37.77054	38.04836	38.3238	38.6003	38.86785	39.13924	39.4169	29	29.12396	29.24278	29.45512	29.70048	29.96597	30.21416	30.46608	30.72109	30.97916	31.23944	31.49421	31.74252	31.98577	32.22552	32.46256	32.69756
29.97453	30.22446	30.47744	30.73346	30.99168	31.24442	31.49077	31.73209	31.96994	32.2051	32.43824	32.67227	32.89874	33.12845	33.36346	24.29	24.39383	24.49335	24.6712	24.87671	25.09909	25.30696	25.51797	25.73156	25.94771	26.16572	26.37911	26.5871	26.79084	26.99166	27.1902	27.38703

0.134396
0.103566
0.052222
0.003186

2021Q3	2021Q4	2022Q1	2022Q2
16.33046	16.44365	16.55847	16.67593
17.88628	18.01026	18.13601	18.26467
18.28375	18.41049	18.53904	18.67055
19.30583	19.43964	19.57538	19.71425
20.44146	20.58315	20.72687	20.87391
21.00928	21.15491	21.30262	21.45374
21.78152	21.93249	22.08563	22.24231
32.93347	33.16175	33.39329	33.63019
27.58462	27.77582	27.96976	28.16818

As at June 2017 — Total_employees_000

Minimum_wage	sex	Total_employees_000	Total_hours_worked_(000)	($)_Total_earnings_million_(000000)	($)_Mean_hourly_earnings	($)_Median_hourly_earnings	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3	2018Q4
Under the minimum wage	Total	71	2364.2	31.4	13.33	14.38	71	71.4615	71.96173	72.37685	72.95777	73.44989771	73.93794639
Minimum wage	Total	104	2555.6	40.2	15.75	15.75	104	104.676	105.4087	106.0168	106.8677	107.5885826	108.3034708
Up to 5% above	Total	101.9	2891.9		16.19	16.1	101.9	102.5624	103.2803	103.8761	104.7098	105.4161208	106.1165738
6-10% above	Total	87.2	2859.4	48.6	16.98	17	87.2	87.7668	88.38117	88.89101	89.60448	90.20888846	90.80829472
11-15% above	Total	99.9	3379	60.2	17.81	18	99.9	100.5494	101.2532	101.8373	102.6547	103.3471096	104.0338147
16-20% above	Total	54.1	1935.1	35.8	18.52	18.5	54.1	54.45165	54.83281	55.14912	55.59177	55.96675305	56.33863239
21-25% above	Total	82	3027.8	58.2	19.22	19.18	82	82.533	83.11074	83.59017	84.26109	84.82945933	85.39312118
More than 25%	Total	1377.5	54470.2	1858.4	33.99	29	1377.5	1386.454	1396.159	1404.213	1415.484	1425.031466	1434.500298
Total	Total	1977.6	73483.1	2179.6	28.77	24.29	1977.6	1990.454	2004.388	2015.95	2032.131	2045.838278	2059.432152

Current share at or under minimum wage			
	employees	8.8%	0.214957524
	hours	6.7%	

For year to March 2022

Total hours worked (HYEFU prelim)	367,019	# hours worked each week for year ending Mar 2022
Share that are employed	86%	

Weighted by earnings

Hours of those under min wage	hours (March yr 2021)	est wage @2020q1	new wage	% wage change	Additional wage bill	Additional wage bill (if youth wage = adult)	Premium over min wage	Pass through	Hours share	Real GDP	Real GDP per hour
Under the minimum wage	10,165	14.92	16.00	7.2%	10,961,985	51,621,621			3.2%	3842	0.38
Minimum wage	10,988	17.63	20.00	13.4%	26,035,341	26,035,341			3.5%	4907	0.45
Up to 5% above	12,434	18.12	20.00	10.4%	23,337,351	23,337,351			3.9%	5708	0.46
6-10% above	12,294	19.01	20.00	5.2%	12,203,162	12,203,162			3.9%	5920	0.48
11-15% above	14,528	19.94	20.00	0.3%	922,647	922,647			4.6%	7337	0.51
					73,460,486	114,120,122			0.0%		
					954.99	1,483.56			0.0%		
Spillovers to bottom of income distribution											
16-20% above	8,320	20.73	21.76	5.0%	8,548,496	8,548,496	17.6%	50%	2.6%	4369	0.53
21-25% above	13,018	21.51	22.20	3.2%	8,960,729	8,960,729	22.0%	50%	4.1%	7095	0.55
					17,509,226	17,509,226			0.0%		
					227.62	227.62			0.0%		
Total additional wage bill					90,969,712	131,629,348			0.0%		
									0.0%		
More than 25%	234,195	38.05	38.05						74.1%	225729	0.96
									0.0%		
Total unadjusted in year to March 2022	315,942	32.21	32.21		10,174,930,285	10,174,930,285				264908.09	0.84
		33.10	33.39		0.9%	1.3%					

		Additional wage bill	(if youth wage = adult)
Scale to annual (from weekly) and convert to millions		1,182.61	1,711.18
COE in 2022		144,266	144,266
Impact on COE in 2022		0.8%	1.2%
Operating Surplus in 2022		101,103	101,103
Impact on operating surplus in 2022		1.2%	1.7%

for distribution chart

wage	share
16.00	3.2%
20.00	15.9%
21.76	2.6%
22.20	4.1%

	Nominal
Weighted increase in lower income wages	6.1%
Weighted increase in total wages	1.6%
Total effected hours	81,747
Elasticity of demand	-0.3
Impact on hours	(1,504.86)
	-0.48%
	-0.41%
Employment in March 2022	2744
Share allocated to employment	50%
Share allocated to hours per person	50%
Impact on average hours per person	-0.21%
Impact on unemployment	-0.21%
Impact on employment	5.6
Change in productivity	0.2%
Net effect on potential	-0.19%
Share to profits	50%
Share to prices	50%

2019Q1	2019Q2	2019Q3	2019Q4	2020Q1	2020Q2	2020Q3	2020Q4	2021Q1	2021Q2	2021Q3	2021Q4	2022Q1	2022Q2	Total_hours_worked_(000)																
														2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3	2018Q4	2019Q1	2019Q2	2019Q3	2019Q4	2020Q1	2020Q2	2020Q3	2020Q4	2021Q1	
74.41352876	74.76908051	75.07206	75.30528	75.54347	75.75664	75.94906	76.11434	76.26433	76.39597	76.50286	76.69748	76.86501	77.02231	2364.2	2389.725	2404.584	2418.84	2435.821	2450.371	2464.737	2478.787	2489.411	2498.488	2505.427	2511.958	2517.79	2523.051	2527.515	2531.561	
109.0000985	109.5209067	109.9647	110.3063	110.6552	110.9675	111.2493	111.4914	111.7111	111.904	112.0605	112.3456	112.591	112.8214	2555.6	2583.192	2599.253	2614.664	2633.02	2648.747	2664.276	2679.464	2690.948	2700.76	2708.26	2715.32	2721.624	2727.311	2732.136	2736.51	
106.7991349	107.3094268	107.7443	108.079	108.4208	108.7268	109.0029	109.2402	109.4554	109.6444	109.7978	110.0771	110.3175	110.5433	2891.9	2923.123	2941.298	2958.736	2979.508	2997.304	3014.877	3032.063	3045.059	3056.162	3064.649	3072.638	3079.772	3086.207	3091.668	3096.616	
91.39239025	91.8290679	92.20117	92.48761	92.78015	93.04196	93.27828	93.48128	93.66549	93.82717	93.95844	94.19746	94.40323	94.59641	2859.4	2890.272	2908.242	2925.485	2946.023	2963.62	2980.995	2997.988	3010.838	3021.816	3030.208	3038.107	3045.16	3051.523	3056.922	3061.815	
104.7029792	105.2032555	105.6296	105.9577	106.2929	106.5928	106.8635	107.0961	107.3071	107.4924	107.6428	107.9166	108.1523	108.3736	3379	3415.482	3436.718	3457.094	3481.364	3502.158	3522.69	3542.772	3557.957	3570.93	3580.847	3590.181	3598.516	3606.035	3612.416	3618.198	
56.70101276	56.97193318	57.20279	57.3805	57.562	57.72443	57.87104	57.99698	58.11127	58.21158	58.29303	58.44132	58.56898	58.68883	1935.1	1955.992	1968.154	1979.823	1993.722	2005.631	2017.389	2028.889	2037.586	2045.015	2050.694	2056.04	2060.813	2065.12	2068.773	2072.085	
85.94238533	86.35302256	86.70294	86.97229	87.24739	87.49359	87.71581	87.9067	88.07993	88.23197	88.35542	88.58018	88.77368	88.95534	3027.8	3060.49	3079.519	3097.777	3119.525	3138.157	3156.556	3174.55	3188.157	3199.781	3208.668	3217.031	3224.5	3231.238	3236.955	3242.136	
1443.727266	1450.625471	1456.504	1461.028	1465.65	1469.786	1473.519	1476.725	1479.635	1482.19	1484.263	1488.039	1491.29	1494.341	54470.2	55058.29	55400.62	55729.09	56120.33	56455.53	56786.52	57110.23	57355.02	57564.15	57724.01	57874.48	58008.85	58130.06	58232.91	58326.12	
2072.678795	2082.582164	2091.021	2097.517	2104.152	2110.089	2115.449	2120.052	2124.23	2127.897	2130.874	2136.295	2140.961	2145.342	73483.1	74276.46	74738.29	75181.41	75709.21	76161.42	76607.94	77044.64	77374.87	77657	77872.66	78075.64	78256.91	78420.44	78559.19	78684.93	

New hours (nominal)	New hours (real)	
9945	9944.517289	
10545	10544.82021	
12047	12047.44762	
12101	12101.42147	
14514	14514.17131	
8196	8196.283586	
12893	12893.11891	
234195	234195.344	
314437	314437	
0.84	0.84	Revised productivity
0.2%	0.2%	

($)_Total_earnings_million_(000000)

2021Q2	2021Q3	2021Q4	2022Q1	2022Q2	2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3	2018Q4	2019Q1	2019Q2	2019Q3	2019Q4	2020Q1	2020Q2	2020Q3	2020Q4	2021Q1	2021Q2	2021Q3	2021Q4	2022Q1	2022Q2
2535.078	2537.845	2543.558	2548.429	2553.006	31514.79	31991.2	32321.44	32749.16	33253.78	33751.44	34230.49	34712.67	35153.25	35577.8	35976.35	36364.29	36736.1	37094.96	37439.14	37774.9	38101.22	38418	38771.37	39116.85	39465.11
2740.312	2743.303	2749.478	2754.743	2759.691	40250.7	40859.17	41280.96	41827.24	42471.74	43107.35	43719.2	44335.04	44897.75	45439.98	45949.01	46444.49	46919.37	47377.7	47817.29	48246.12	48662.89	49067.48	49518.81	49960.06	50404.86
3100.919	3104.303	3111.291	3117.249	3122.849	46819.86	47527.64	48018.26	48653.7	49403.39	50142.74	50854.44	51570.78	52225.34	52856.07	53448.17	54024.52	54576.89	55110.04	55621.36	56120.18	56604.98	57075.6	57600.59	58113.85	58631.24
3066.07	3069.416	3076.326	3082.217	3087.753	48552.61	49286.59	49795.36	50454.32	51231.76	51998.47	52736.51	53479.36	54158.14	54812.21	55426.23	56023.9	56596.72	57149.6	57679.85	58197.12	58699.86	59187.9	59732.32	60264.58	60801.11
3623.225	3627.179	3635.345	3642.306	3648.849	60179.99	61089.74	61720.36	62537.12	63500.74	64451.06	65365.84	66286.6	67127.93	67938.64	68699.7	69440.51	70150.5	70835.78	71493.02	72134.17	72757.3	73362.22	74037.02	74696.74	75361.76
2074.964	2077.228	2081.905	2085.891	2089.638	35838.05	36379.82	36755.36	37241.76	37815.61	38381.53	38926.3	39474.63	39975.65	40458.44	40911.66	41352.82	41775.64	42183.73	42575.12	42956.94	43328.02	43688.26	44090.11	44482.98	44879.02
3246.641	3250.185	3257.501	3263.739	3269.602	58194.32	59074.05	59683.86	60473.67	61405.49	62324.46	63209.06	64099.43	64913	65696.96	66432.91	67149.28	67835.85	68498.51	69134.06	69754.06	70356.63	70941.59	71594.12	72232.07	72875.16
58407.16	58470.9	58602.53	58714.75	58820.22	1851442	1879431	1898832	1923959	1953605	1982842	2010985	2039312	2065196	2090137	2113552	2136343	2158186	2179268	2199488	2219213	2238384	2256994	2277755	2298051	2318510
78794.26	78880.26	79057.83	79209.22	79351.5	2172792	2205639	2228407	2257896	2292688	2326999	2360027	2393271	2423647	2452918	2480396	2507142	2532777	2557519	2581248	2604397	2626895	2648735	2673099	2696918	2720929

($)_Mean_hourly_earnings

2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3
13.33	13.38698	13.44159	13.5392	13.65198	13.77401
15.75	15.81732	15.88185	15.99718	16.13043	16.27462
16.19	16.2592	16.32554	16.44408	16.58106	16.72928
16.98	17.05258	17.12215	17.24648	17.39014	17.54559
17.81	17.88613	17.9591	18.08951	18.24019	18.40324
18.52	18.59916	18.67504	18.81065	18.96734	19.13689
19.22	19.30215	19.3809	19.52163	19.68425	19.86021
33.99	34.13529	34.27455	34.52343	34.81101	35.12219
28.77	28.89298	29.01085	29.22151	29.46492	29.72831

($)_Median_hourly_earnings

2018Q4	2019Q1	2019Q2	2019Q3	2019Q4	2020Q1	2020Q2	2020Q3	2020Q4	2021Q1	2021Q2	2021Q3	2021Q4	2022Q1	2022Q2
13.88809	14.00389	14.12111	14.23973	14.35937	14.47647	14.59061	14.70242	14.81263	14.92159	15.0296	15.13804	15.24297	15.3494	15.45829
16.40941	16.54624	16.68473	16.82489	16.96625	17.10461	17.23947	17.37158	17.50179	17.63053	17.75816	17.88628	18.01026	18.13601	18.26467
16.86783	17.00848	17.15085	17.29492	17.44022	17.58246	17.72108	17.85688	17.99073	18.12307	18.25426	18.38596	18.5134	18.64267	18.77492
17.69091	17.83842	17.98773	18.13883	18.29123	18.4404	18.58579	18.72822	18.8686	19.00739	19.14499	19.28311	19.41677	19.55235	19.69105
18.55566	18.71038	18.86699	19.02547	19.18532	19.34179	19.49429	19.64367	19.79092	19.93649	20.08081	20.22569	20.36589	20.50809	20.65357
19.29539	19.45627	19.61913	19.78393	19.95015	20.11285	20.27143	20.42677	20.57989	20.73127	20.88134	21.032	21.17278	21.32565	21.47693
20.02469	20.19166	20.36067	20.5317	20.70421	20.87306	21.03763	21.19884	21.35774	21.51484	21.67059	21.82694	21.97823	22.13169	22.2887
35.41307	35.70835	36.00724	36.30971	36.61477	36.91338	37.20443	37.48953	37.77054	38.04836	38.3238	38.6003	38.86785	39.13924	39.4169
29.97453	30.22446	30.47744	30.73346	30.99168	31.24442	31.49077	31.73209	31.96994	32.2051	32.43824	32.67227	32.89874	33.12845	33.36346

2017Q2	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3	2018Q4	2019Q1	2019Q2	2019Q3	2019Q4	2020Q1	2020Q2	2020Q3	2020Q4	2021Q1	2021Q2
14.38	14.44147	14.50038	14.60568	14.72734	14.85899	14.98205	15.10698	15.23343	15.36139	15.49045	15.61678	15.73991	15.86053	15.97942	16.09695	16.21348
15.75	15.81732	15.88185	15.99718	16.13043	16.27462	16.40941	16.54624	16.68473	16.82489	16.96625	17.10461	17.23947	17.37158	17.50179	17.63053	17.75816
16.1	16.16882	16.23478	16.35267	16.48889	16.63628	16.77407	16.91393	17.0555	17.19877	17.34327	17.48471	17.62257	17.75762	17.89072	18.02232	18.15278
17	17.07267	17.14232	17.26679	17.41063	17.56626	17.71175	17.85943	18.00892	18.1602	18.31277	18.46212	18.60769	18.75028	18.89082	19.02978	19.16754
18	18.07694	18.15069	18.28249	18.43478	18.59957	18.75361	18.90998	19.06827	19.22844	19.39	19.54813	19.70226	19.85324	20.00205	20.14918	20.29504
18.5	18.57908	18.65488	18.79033	18.94686	19.11622	19.27455	19.43526	19.59794	19.76257	19.92861	20.09113	20.24954	20.40471	20.55766	20.70888	20.85879
19.18	19.26198	19.34057	19.48101	19.64328	19.81887	19.98302	20.14964	20.3183	20.48897	20.66112	20.82962	20.99385	21.15473	21.3133	21.47007	21.62549
29	29.12396	29.24278	29.45512	29.70048	29.96597	30.21416	30.46608	30.72109	30.97916	31.23944	31.49421	31.74252	31.98577	32.22552	32.46256	32.69756
24.29	24.39383	24.49335	24.6712	24.87671	25.09909	25.30696	25.51797	25.73156	25.94771	26.16572	26.37911	26.5871	26.79084	26.99166	27.1902	27.38703

0.134396
0.103566
0.052222
0.003186

2021Q3	2021Q4	2022Q1	2022Q2
16.33046	16.44365	16.55847	16.67593
17.88628	18.01026	18.13601	18.26467
18.28375	18.41049	18.53904	18.67055
19.30583	19.43964	19.57538	19.71425
20.44146	20.58315	20.72687	20.87391
21.00928	21.15491	21.30262	21.45374
21.78152	21.93249	22.08563	22.24231
32.93347	33.16175	33.39329	33.63019
27.58462	27.77582	27.96976	28.16818

	Levels				Operating Surplus Real Prod GDP	QPC			
	HY17P2::LHEMPZQ	HY17P2::LHHWZQ	HY17P2::LQHOTOZQ	HY17P2::FCOEQ		HY17P2::LHEMPZQ	HY17P2::LHHWZQ	HY17P2::LQHOTOZQ	HY17P2::FCOEQ
1990Q1	1533	53434	13.67204894		28077				
1990Q2	1543	53117	13.8248937		28074	0.7%	-0.6%	1.1%	
1990Q3	1536	53543	13.99823304		28327	-0.5%	0.8%	1.3%	
1990Q4	1527	52668	14.15447623		28661	-0.6%	-1.6%	1.1%	
1991Q1	1519	51774	14.27544698		27967	-0.5%	-1.7%	0.9%	
1991Q2	1513	52259	14.37112745	8098.249403	27777	-0.4%	0.9%	0.7%	
1991Q3	1505	52141	14.51737108	8116.026392	27865	-0.5%	-0.2%	1.0%	0.2%
1991Q4	1499	51593	14.59434235	8111.07186	28047	-0.4%	-1.1%	0.5%	-0.1%
1992Q1	1508	52366	14.67127307	8208.652345	28127	0.6%	1.5%	0.5%	1.2%
1992Q2	1518	52795	14.71756555	8291.901095	28127	0.7%	0.8%	0.3%	1.0%
1992Q3	1511	52172	14.72381167	8247.974384	27925	-0.5%	-1.2%	0.0%	-0.5%
1992Q4	1518	52101	14.75468205	8322.949126	28273	0.5%	-0.1%	0.2%	0.9%
1993Q1	1526	54262	14.7094264	8356.175395	28736	0.5%	4.1%	-0.3%	0.4%
1993Q2	1535	53943	14.77230804	8533.976301	29372	0.6%	-0.6%	0.4%	2.1%
1993Q3	1552	54905	14.75097763	8631.197564	29966	1.1%	1.8%	-0.1%	1.1%
1993Q4	1566	56803	14.78467097	8735.342259	30247	0.9%	3.5%	0.2%	1.2%
1994Q1	1582	54559	14.85598743	8865.483876	30709	1.0%	-4.0%	0.5%	1.5%
1994Q2	1599	56908	14.93973438	9036.617137	30918	1.1%	4.3%	0.6%	1.9%
1994Q3	1620	57862	14.98624308	9191.406784	31446	1.3%	1.7%	0.3%	1.7%
1994Q4	1643	59331	15.05571764	9351.393789	31860	1.4%	2.5%	0.5%	1.7%
1995Q1	1662	58357	15.14220983	9508.582289	32244	1.2%	-1.6%	0.6%	1.7%
1995Q2	1678	59232	15.2472611	9625.759924	32666	1.0%	1.5%	0.7%	1.2%
1995Q3	1695	60184	15.38264239	9756.034285	32965	1.0%	1.6%	0.9%	1.4%
1995Q4	1709	60752	15.49512705	9883.894244	33190	0.8%	0.9%	0.7%	1.3%
1996Q1	1722	61456	15.61620099	10063.31155	33648	0.8%	1.2%	0.8%	1.8%
1996Q2	1740	61445	15.80145221	10300.08821	33953	1.0%	0.0%	1.2%	2.4%
1996Q3	1754	61340	15.92365958	10479.14484	34177	0.8%	-0.2%	0.8%	1.7%
1996Q4	1744	61046	16.09500433	10540.17805	34632	-0.6%	-0.5%	1.1%	0.6%
1997Q1	1745	61502	16.29092141	10650.58889	34497	0.1%	0.7%	1.2%	1.0%
1997Q2	1754	61325	16.39671607	10914.84343	35175	0.5%	-0.3%	0.6%	2.5%
1997Q3	1752	61130	16.52436385	10924.44752	35087	-0.1%	-0.3%	0.8%	0.1%
1997Q4	1750	60697	16.61467385	10925.52425	35014	-0.1%	-0.7%	0.5%	0.0%
1998Q1	1745	60644	16.71234022	10942.1848	34803	-0.3%	-0.1%	0.6%	0.2%
1998Q2	1738	61361	16.87735863	11078.30125	34973	-0.4%	1.2%	1.0%	1.2%
1998Q3	1737	61145	16.94160463	11139.40582	35037	-0.1%	-0.4%	0.4%	0.6%
1998Q4	1734	59960	17.13617877	11188.36539	35387	-0.2%	-1.9%	1.1%	0.4%
1999Q1	1752	61877	17.21323746	11307.92755	35803	1.0%	3.2%	0.4%	1.1%
1999Q2	1758	61703	17.27602262	11290.30656	36099	0.3%	-0.3%	0.4%	-0.2%
1999Q3	1766	62028	17.46293378	11424.3215	37105	0.5%	0.5%	1.1%	1.2%
1999Q4	1786	63452	17.44427924	11554.61916	37565	1.1%	2.3%	-0.1%	1.1%
2000Q1	1784	62725	17.51485065	11547.75277	38115	-0.1%	-1.1%	0.4%	-0.1%
2000Q2	1784	62520	17.63364214	11733.86397	38127	0.0%	-0.3%	0.7%	1.6%
2000Q3	1806	63851	17.76571017	11970.29321	38282	1.2%	2.1%	0.7%	2.0%
2000Q4	1822	64164	17.88179009	12164.44612	38353	0.9%	0.5%	0.7%	1.6%
2001Q1	1824	63812	18.08228777	12272.3967	38484	0.1%	-0.5%	1.1%	0.9%
2001Q2	1841	64391	18.21077954	12655.8819	39027	0.9%	0.9%	0.7%	3.1%
2001Q3	1845	64333	18.37271605	12738.3951	39328	0.2%	-0.1%	0.9%	0.7%
2001Q4	1868	64948	18.50299815	12989.95119	39906	1.2%	1.0%	0.7%	2.0%

2002Q1	1893	66122	18.7498127	13336.77181	40263	1.3%	1.8%	1.3%	2.7%
2002Q2	1905	66574	18.66096106	13444.18785	40806	0.6%	0.7%	-0.5%	0.8%
2002Q3	1903	66666	18.9628471	13699.90336	41257	-0.1%	0.1%	1.6%	1.9%
2002Q4	1918	66507	19.16871504	13903.8222	41815	0.8%	-0.2%	1.1%	1.5%
2003Q1	1926	67550	19.18409422	14082.08659	42056	0.4%	1.6%	0.1%	1.3%
2003Q2	1942	67375	19.33829793	14515.91202	42259	0.8%	-0.3%	0.8%	3.1%
2003Q3	1971	68436	19.54618938	14784.69023	43138	1.5%	1.6%	1.1%	1.9%
2003Q4	1973	68855	19.82500993	14914.49126	43690	0.1%	0.6%	1.4%	0.9%
2004Q1	1991	70326	19.85457231	15187.9065	44401	0.9%	2.1%	0.1%	1.6%
2004Q2	2006	71069	20.17967434	15623.13577	44829	0.8%	1.1%	1.6%	3.1%
2004Q3	2030	70794	20.22886858	15935.79649	44891	1.2%	-0.4%	0.2%	2.0%
2004Q4	2064	72015	20.25008281	16305.39863	45074	1.7%	1.7%	0.1%	2.3%
2005Q1	2062	71741	20.57091256	16482.6691	45568	-0.1%	-0.4%	1.6%	1.1%
2005Q2	2071	71720	20.92833735	17009.26535	46367	0.4%	0.0%	1.7%	3.2%
2005Q3	2098	73628	21.12767745	17290.20688	46501	1.3%	2.7%	1.0%	1.7%
2005Q4	2099	72279	21.3777422	17491.98736	46361	0.0%	-1.8%	1.2%	1.2%
2006Q1	2120	72433	21.67165464	17904.5404	47100	1.0%	0.2%	1.4%	2.4%
2006Q2	2140	73590	21.87569462	18210.3617	47330	0.9%	1.6%	0.9%	1.7%
2006Q3	2133	73612	22.20520442	18488.16568	47680	-0.3%	0.0%	1.5%	1.5%
2006Q4	2133	73902	22.46857202	18718.41918	47994	0.0%	0.4%	1.2%	1.2%
2007Q1	2159	73428	22.67244843	19032.05344	48527	1.2%	-0.6%	0.9%	1.7%
2007Q2	2170	74068	22.84188893	19751.91753	48884	0.5%	0.9%	0.7%	3.8%
2007Q3	2166	73878	23.09025125	19906.61591	49325	-0.2%	-0.3%	1.1%	0.8%
2007Q4	2180	74203	23.41984873	20357.75028	49472	0.6%	0.4%	1.4%	2.3%
2008Q1	2182	74163	23.74248278	20764.71628	49367	0.1%	-0.1%	1.4%	2.0%
2008Q2	2181	73575	24.07723804	20956.03045	49111	0.0%	-0.8%	1.4%	0.9%
2008Q3	2182	73819	24.39268011	21191.83057	48929	0.0%	0.3%	1.3%	1.1%
2008Q4	2195	73411	24.69954465	21483.33674	48701	0.6%	-0.6%	1.3%	1.4%
2009Q1	2156	72553	25.03736015	21472.80225	48110	-1.8%	-1.2%	1.4%	0.0%
2009Q2	2157	71980	25.2106805	21549.92017	48128	0.0%	-0.8%	0.7%	0.4%
2009Q3	2137	71131	25.35102394	21458.4559	48320	-0.9%	-1.2%	0.6%	-0.4%
2009Q4	2139	71009	25.39681571	21405.54552	48828	0.1%	-0.2%	0.2%	-0.2%
2010Q1	2147	72257	25.28748614	21408.07841	48955	0.4%	1.8%	-0.4%	0.0%
2010Q2	2151	72374	25.48322785	21712.81951	49382	0.2%	0.2%	0.8%	1.4%
2010Q3	2169	72905	25.62979852	22085.1178	49305	0.8%	0.7%	0.6%	1.7%
2010Q4	2161	73421	25.85819025	22395.3508	49004	-0.4%	0.7%	0.9%	1.4%
2011Q1	2181	71729	25.94262632	22637.71189	49526	0.9%	-2.3%	0.3%	1.1%
2011Q2	2188	73671	26.2596047	22776.49307	49848	0.3%	2.7%	1.2%	0.6%
2011Q3	2192	74016	26.43838933	22999.95216	50318	0.2%	0.5%	0.7%	1.0%
2011Q4	2192	73564	26.58636672	23172.6419	50507	0.0%	-0.6%	0.6%	0.8%
2012Q1	2194	72452	26.93053436	23355.91287	50975	0.1%	-1.5%	1.3%	0.8%
2012Q2	2196	73214	27.0223668	23599.22905	51118	0.1%	1.1%	0.3%	1.0%
2012Q3	2188	72842	27.17128853	23622.63144	51218	-0.4%	-0.5%	0.6%	0.1%
2012Q4	2195	73943	27.27347593	23807.10396	51928	0.3%	1.5%	0.4%	0.8%
2013Q1	2198	74748	27.48933857	24024.03555	51886	0.1%	1.1%	0.8%	0.9%
2013Q2	2208	74345	27.59884635	23810.9973	52447	0.5%	-0.5%	0.4%	-0.9%
2013Q3	2243	75375	27.88008074	24587.39037	52671	1.6%	1.4%	1.0%	3.3%
2013Q4	2259	75411	28.04837032	24905.09334	52677	0.7%	0.0%	0.6%	1.3%
2014Q1	2280	77099	28.19305994	25375.519	53440	0.9%	2.2%	0.5%	1.9%
2014Q2	2287	77480	28.2985032	25462.92891	53849	0.3%	0.5%	0.4%	0.3%

2014Q3	2314	77818	28.52190371	25782.89495		54452	1.2%	0.4%	0.8%	1.3%
2014Q4	2340	78041	28.78201319	26314.26659		55027	1.1%	0.3%	0.9%	2.1%
2015Q1	2354	79081	28.79190096	26630.90955		55087	0.6%	1.3%	0.0%	1.2%
2015Q2	2354	78590	29.07198455	26969.37724		55151	0.0%	-0.6%	1.0%	1.3%
2015Q3	2349	78860	29.19628441	27065.65522		55656	-0.2%	0.3%	0.4%	0.4%
2015Q4	2372	79799	29.38396636	27511.85085		56255	1.0%	1.2%	0.6%	1.6%
2016Q1	2401	81113	29.50572623	27805.11669		56645	1.2%	1.6%	0.4%	1.1%
2016Q2	2459	83160	29.67099285	28194.38832		57086	2.4%	2.5%	0.6%	1.4%
2016Q3	2493	84126	29.68987351	28731.62391		57481	1.4%	1.2%	0.1%	1.9%
2016Q4	2510	85080	29.75051655	29024.48267		57695	0.7%	1.1%	0.2%	1.0%
2017Q1	2538	84555	29.94311239	29565.574	77241.88348	58054	1.1%	-0.6%	0.6%	1.9%
2017Q2	2535	85363	30.13307558	29703.50503		58521	-0.1%	1.0%	0.6%	0.5%
2017Q3	2551.4775	86284.62524	30.26187751	29889.98683		58989.168	0.6%	1.1%	0.4%	0.6%
2017Q4	2569.338	86821.11406	30.38533873	30198.5341		59579.05968	0.7%	0.6%	0.4%	1.0%
2018Q1	2584.1595	87335.86975	30.60597598	30598.15342	82550.75479	60443.23	0.6%	0.6%	0.7%	1.3%
2018Q2	2604.9008	87948.99677	30.86092266	31069.63497		60863.9	0.8%	0.7%	0.8%	1.5%
2018Q3	2622.4717	88474.31607	31.13679091	31534.60506		61423.88	0.7%	0.6%	0.9%	1.5%
2018Q4	2639.8971	88993.02356	31.39467052	31982.19483		61973.47	0.7%	0.6%	0.8%	1.4%
2019Q1	2656.8774	89500.33158	31.6564425	32432.70591	87406.68989	62496.68	0.6%	0.6%	0.8%	1.4%
2019Q2	2669.5721	89883.94408	31.92141509	32844.34489		62930.18	0.5%	0.4%	0.8%	1.3%
2019Q3	2680.3896	90211.68704	32.1895605	33241.00356		63205.88	0.4%	0.4%	0.8%	1.2%
2019Q4	2688.7166	90462.2123	32.46001039	33613.38683		63566.69	0.3%	0.3%	0.8%	1.1%
2020Q1	2697.2212	90698.01348	32.72473413	33975.85537	92220.23808	63908.61	0.3%	0.3%	0.8%	1.1%
2020Q2	2704.8322	90908.58951	32.98275277	34323.23539		64256.71	0.3%	0.2%	0.8%	1.0%
2020Q3	2711.7022	91098.54653	33.23550337	34658.51706		64586.16	0.3%	0.2%	0.8%	1.0%
2020Q4	2717.6036	91259.72989	33.48462662	34980.09711		64922.09	0.2%	0.2%	0.7%	0.9%
2021Q1	2722.9589	91405.804	33.73092765	35293.79847	96414.09459	65246.86	0.2%	0.2%	0.7%	0.9%
2021Q2	2727.6591	91532.80599	33.97510736	35598.68673		65540.61	0.2%	0.1%	0.7%	0.9%
2021Q3	2731.4754	91632.70504	34.22023273	35894.65368		66144.66	0.1%	0.1%	0.7%	0.8%
2021Q4	2738.424	91838.98405	34.45742802	36224.83044		66440.58	0.3%	0.2%	0.7%	0.9%
2022Q1	2744.4058	92014.85033	34.69802218	36547.61048	101103.1463	66782.24	0.2%	0.2%	0.7%	0.9%
2022Q2	2750.0218	92180.12988	34.9441714	36873.00692		67153.69	0.2%	0.2%	0.7%	0.9%

Transposed

	2017Q3	2017Q4	2018Q1	2018Q2	2018Q3	2018Q4	2019Q1	2019Q2	2019Q3	2019Q4	2020Q1	2020Q2	2020Q3	2020Q4	2021Q1	2021Q2	2021Q3	2021Q4
HY17P2::LHEMPZQ	0.6%	0.7%	0.6%	0.8%	0.7%	0.7%	0.6%	0.5%	0.4%	0.3%	0.3%	0.3%	0.3%	0.2%	0.2%	0.2%	0.1%	0.3%
HY17P2::LHHWZQ	1.1%	0.6%	0.6%	0.7%	0.6%	0.6%	0.6%	0.4%	0.4%	0.3%	0.3%	0.2%	0.2%	0.2%	0.2%	0.1%	0.1%	0.2%
HY17P2::LQHOTOZQ	0.4%	0.4%	0.7%	0.8%	0.9%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.7%	0.7%	0.7%	0.7%	0.7%
HY17P2::FCOEQ	0.6%	1.0%	1.3%	1.5%	1.5%	1.4%	1.4%	1.3%	1.2%	1.1%	1.1%	1.0%	1.0%	0.9%	0.9%	0.9%	0.8%	0.9%

2022Q1	2022Q2
0.2%	0.2%
0.2%	0.2%
0.7%	0.7%
0.9%	0.9%

Policy impacts on inflation

This note analyses the impact of new policy on the Labour Market and Migration.

Raising the minimum wage

Headline: The estimated effect in 2022 of the increase in minimum wages to $20 by 2021 is:

- +1.6% for total wages,
- -0.4% for total hours worked,
- +0.2% for average labour productivity,
- -0.2% for potential output,
- Increase wages by around $1.2 billion (~0.8% of total compensation of employees)

Methodology:

For each of the next four years, starting with a new minimum wage of $16.50 in 2018 and reaching $20 in 2021:

- Estimated a counter factual minimum wage (grow current minimum wage by preliminary wage growth forecasts, Figure 1)
- Estimated how many people would be affected directly, i.e. how many people are currently paid between the old (counterfactual) and new minimum wage
- Estimated how much of a spill over there would be up the wage distribution
- Estimated what that would mean for the increase in cost for businesses
- Assumed an elasticity of demand for labour
- Assumed a split of reduced labour demand between heads and hours to work out the effect on the NAIRU and trend average hours
- Worked out what the compositional shift will do to labour productivity

Assumptions:

- The spill over up the wage distribution is assumed up to 25% above the current minimum wage
- Elasticity of demand for labour of -0.3
- Split of reduced labour demand between number of employees and hours of 50/50
- Minimum wage changes do not effect self-employed workers

Context:

Currently around 9% of employees and 7% of hours worked are by workers at or under the minimum wage. A further 21% of employees and 19% of hours worked are within 25% of the minimum wage. Shifting the minimum wage would imply approximately 19% of hours worked would be at or under the minimum wage by 2022. The income distribution is likely to become more concentrated around the minimum wage.

Figure 1 - Mean hourly earnings
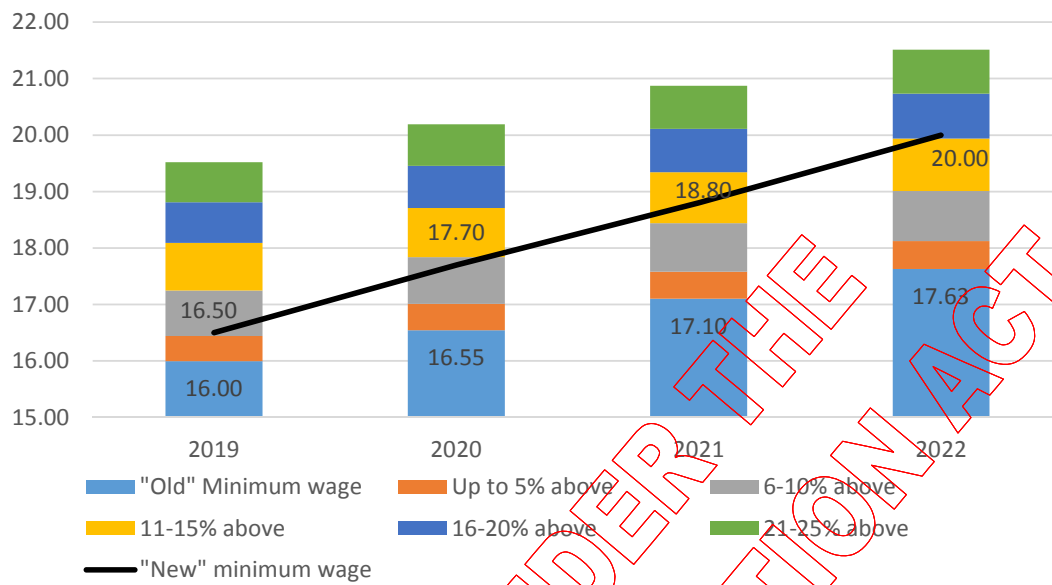
Figure 2 - Distribution of Wages (bottom 25%)
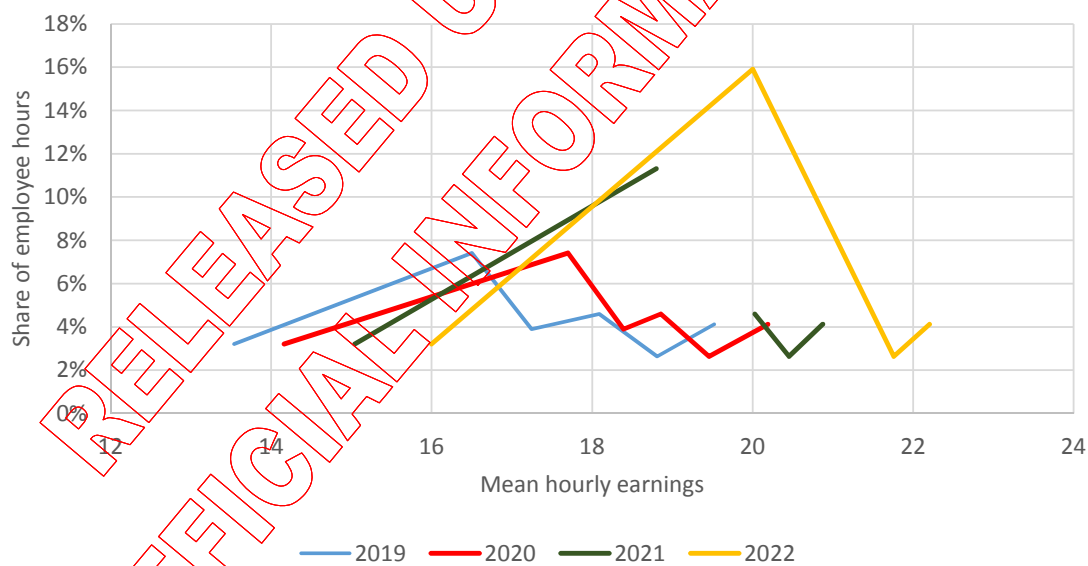
Sensitivity to elasticity:

Elasticity	Hours impact	Potential output impact
-0.2	-0.27	-0.13
-0.3	-0.41	-0.19
-0.4	-0.55	-0.26
-0.46	-0.63	-0.30
-0.5	-0.68	-0.32
-0.6	-0.82	-0.39

Please see Appendix A for full set of results and assumptions

Appendix A: Summary of Minimum Wage Impacts

	March years			
	2019	2020	2021	2022
Wages (mean hourly earnings, as at 1 April/March quarter)				
"Old" minimum wage	16.00	16.55	17.10	17.63
"New" minimum wage	16.50	17.70	18.80	20.00
Total employees (not adjusted for new minimum wage)	30.03	31.06	32.11	33.10
Total employees (adjusted for new minimum wage)	30.05	31.16	32.29	33.39
Hours worked affected (hours per week, annual sum)				
Under the new minimum wage	32,479	33,059	45,587	60,409
Share of total employee hours	10.6%	10.6%	14.5%	19.1%
Spillover to bottom of income distribution	46,572	47,404	35,637	21,338
Share of total employee hours	15.2%	15.2%	11.4%	6.8%
Total affected hours	79,051	80,463	81,224	81,747
Share of total employee hours	25.9%	25.9%	25.9%	25.9%
Total employee hours	305,523	310,980	313,921	315,942
Total hours	354,917	361,256	364,673	367,019
Static cost estimates ($ millions)				
Bring workers to new minimum wage	78	293	567	955
Spillover to bottom of income distribution	-	114	166	228
Total	78	407	733	1,183
Share of COE	0.1%	0.3%	0.5%	0.8%
Share of Operating Surplus	0.1%	0.4%	0.8%	1.2%
Youth / starting out rate abolished	378	460	494	529
Macroeconomic impacts				
Weighted increase in lower income wages	0.5%	2.3%	4.0%	6.1%
Weighted increase in total wages	0.1%	0.6%	1.0%	1.6%
Total impact on hours worked	-0.03%	-0.15%	-0.27%	-0.41%
Average hours per person	-0.02%	-0.08%	-0.13%	-0.21%
Employment	-0.02%	-0.08%	-0.13%	-0.21%
Impact on labour productivity	0.02%	0.08%	0.14%	0.22%
Impact on potential output	-0.01%	-0.07%	-0.12%	-0.19%

Assumptions	
Youth rate to min wage	80%
Pass through assumption	50%
Elasticity of labour	-0.3
Hours impact on employment	50%
Hours impact on average per person	50%
Minimum wage phasing	Change row 6 above

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THE TREASURY
Kaitohutohu Kaupapa Rawa

Treasury Report: Increasing the Minimum Wage

Date:	14 December 2017	Report No:	T2017/2483
		File Number:	SH-2-2

Action Sought

	Action Sought	Deadline
Minister of Finance (Hon Grant Robertson)	**Read** prior to the CBC meeting on lifting the minimum wage; **Refer** the report to the Minister for Workplace Relations and the Minister of Employment; **Indicate** whether you wish to discuss this paper with Treasury officials.	Wednesday 20 December
Associate Minister of Finance (Hon David Clark)	**Read** prior to the CBC meeting on lifting the minimum wage.	Wednesday 20 December

Contact for Telephone Discussion (if required)

Name	Position	Telephone		1st Contact
Margaret Galt	Principal Advisor, Labour Market, Immigration & Tertiary Education	s9(2)(k)	N/A (mob)	✓
Jennie Marjoribanks	Senior Analyst, Labour Market, Immigration & Tertiary Education		N/A (mob)	
Andrew Rutledge	Acting Manager, Labour Market, Immigration & Tertiary Education		s9(2)(a)	

Actions for the Minister's Office Staff (if required)

Return the signed report to Treasury.

Refer the report to the Minister for Workplace Relations and Safety and the Minister of Employment

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Note any
feedback on
the quality of
the report

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Treasury Report: Increasing the Minimum Wage

Executive Summary

The increase in the minimum wage to $16.50 per hour is expected to increase the wages of about 164,100 people (out of a workforce of 1.9 million) and have relatively little impact on employment (an estimated restraint equivalent to approximately 3000 jobs.)

However, research suggests that the impact of moving to $20 per hour by 2021 could be more significant, particularly if economic conditions are less buoyant than at the moment.

We understand your goal in lifting the minimum wage is to increase the incomes of low skilled workers. The minimum wage is a tool for doing this, but most minimum wage earners (and those on wages near it) are young people (under the age of 24), many of whom are studying, and part-time workers. Compared to the past, fewer workers on the minimum wage are now full-time workers and adults with children.

While a higher minimum wage may encourage employers to invest in labour saving technology and preference the growth of industries with fewer low-skilled jobs, the minimum wage is not likely to be the driver of a step-change in either productivity growth or wages in New Zealand. The industries it most affects (particularly hospitality, administration, and retail) are not those where we think a significant lift in productivity will change the economic trajectory of New Zealand.

Lifting the minimum wage to $20 may have some unintended consequences but the Government has a number of policy options to mitigate these. These are:

- The risk of higher youth unemployment – and this can be mitigated by timing the increases towards a buoyant labour market and by keeping starting-out rates as a safety valve for when the labour market is depressed

- s9(2)(f)(iv)

- The risk that export industries will become less profitable (and so grow more slowly) because they cannot pass on the wage increases – and this can be mitigated by considering the impact of the minimum wage on total labour costs

- Finally, there is a potential risk that if New Zealand's minimum wage becomes attractive relative to Australia's that it could encourage low skilled labour to either stay here or migrate here. This can be mitigated by active consideration of the relativity with Australia.

We suggest you refer this report to the Minister for Workplace Relations and Safety and the Minister of Employment. If you wish, Treasury can discuss this report further with you.

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Recommended Action

We recommend that you:

a **note** that the proposed minimum wage increase to $16.50 will increase the income of approximately 164,100 people and is unlikely to have significant negative impacts on employment given the buoyant labour market;

b **note** that the impact of future increases to your target of $20 by 2021 will depend on economic conditions at the time of each increase;

c **direct** Treasury to work with the Ministry of Business, Innovation and Employment on policy options to mitigate potential unintended consequences from increasing the minimum wage to $20 per hour by 2021.

   Agree/disagree

d **refer** this report to the Minister for Workplace Relations and Safety and the Minister of Employment

   Refer/not referred.

e **indicate** whether you wish to discuss this paper with Treasury officials.

   Yes/No

Andrew Rutledge
Acting Manager, Labour Market, Immigration & Tertiary Education

Hon Grant Robertson
Minister of Finance

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Treasury Report: Increasing the Minimum Wage

Purpose of Report

1. Ahead of CBC's consideration on 20 December of an increase in the adult minimum wage to $16.50, this report:

   - provides our advice about this increase, which we support, and

   - outlines considerations that we think should inform the Government's approach to increasing the minimum wage, to ensure the changes provide the maximum support for the Government's income and productivity objectives.

Increasing the Minimum Wage to $16.50

2. The Cabinet paper and Regulatory Impact Statement (RIS) outline the expected impacts of the 100 Day Plan commitment to increase the minimum wage to $16.50 from 1 April 2018. They show the change is likely to lift the wages of about 164,100 people (out of our workforce of 1.9 million) and have a small negative employment impact (a restraint on employment equivalent to about 3,000 jobs). The analysis was undertaken by the Ministry of Business, Innovation and Employment (MBIE), drawing on a model commissioned from the New Zealand Institute of Economic Research. This model has been used before and it is reasonably reliable for changes of this magnitude. The Treasury separately modelled the impact of the minimum wage for its forecasts and our results are consistent with those of MBIE.

3. Treasury supports the proposed increase. The impacts are at the level we would expect when the labour market is tight with declining unemployment.

4. The fiscal impact is estimated at about $20 million based on information from the five most affected agencies. Agencies will have expected an increase in the minimum wage (though perhaps only to $16.25) and so they should be expected to manage this increase within their existing baselines without further funding being required.

5. Deleted - Not Relevant to Request

Implementing Larger Increases in the Minimum Wage

6. The Government has announced it intends to increase the minimum wage to $20 by 2021, with the goal of improving the living standards of workers on low incomes, while also supporting a more productive economy. The balance of this report outlines insights drawn from New Zealand and overseas experience with minimum wage increases and how these insights may assist you to achieve your key objectives of lifting incomes, productivity and sustainable and inclusive economic growth.

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7. A critical insight from research is that the impact of the minimum wage is highly dependent on labour market conditions. The same change will have much more significant negative impacts when the labour market is depressed than when it is buoyant. And when negative impacts do occur, these affect the very groups that the minimum wage is designed to help – low income workers, especially unskilled workers and youth.

8. This report is not focused on the fiscal costs and economic impacts of lifting the minimum wage to $20. The RIS for the current increase and HYEFU contain some analysis of this. HYEFU suggests the economic impact would be a mean hourly earnings increase of 1.6% and total hours worked would reduce by 0.4%. The RIS does not model the proposed increase to $20, but suggests a large fiscal cost (it shows a cost of almost $240 million annually if the minimum wage rose to $20.20 in one increase in 2018). However, these estimates are approximate and officials will provide more accurate estimates when you are considering each wage increase.

The minimum wage is not a strong lever for lifting low incomes especially for families

The minimum wage lifts the lowest employee incomes…

9. The minimum wage originated as a poverty-reduction tool and it continues to support the lowest worker incomes in three ways:

- It modifies the lowest wages and, in New Zealand, this is significant because our minimum wage is one of the highest compared to our median wage rate.

- It has a spill-over effect on the wages of those earning just above the minimum. New Zealand statistics show a fairly smooth curve of workers earning increments above the minimum wage, suggesting these wages are set in reference to the minimum wage. But research by Bill Rosenberg suggests the spill-over effect tapers off relatively quickly, possibly because our high minimum wage means there is less room for employers to move.

- It also supports broader government income support goals by limiting the risk that such payments are diverted to lower wage bills for employers as has happened overseas by mandating a wage floor.[1]

… but the effectiveness of the minimum wage as a way of supporting families has reduced…

10. Over time, the impact of minimum wage policy on the lowest incomes has reduced because a smaller proportion of working hours are at or near the minimum wage, largely because fewer workers are in unskilled occupations. The proportion of working hours at or below[2] the minimum wage is now 7% of total employee hours (9% employees). While this proportion may increase as the minimum wage rises, its low level means that because, the minimum wage does not reach many people, it needs to be supplemented by tax and welfare policies.

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[1] For instance, one study of the Earned Income Tax Credit in the United States found that low skilled workers' income increased by only 73 cents for each dollar of tax credit and the other 27 cents was transferred to the employer through lower wages. J Rothstein (2010.) Is the EITC as good as an NIT? Conditional cash transfers and tax incidence: *American Economic Journal: Economic Policy*.

[2] Those below the minimum wage include those on the starting-out rate, for example.

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…as the minimum wage is increasingly a transitional stage in people's working life …

11. There has also been a significant change in who is on the minimum wage, and we have summarised these changes in four graphs. The first graph shows the characteristics of minimum wage workers, and it shows that it is now primarily earned by young people (55.7% of minimum wage workers are between the age of 16 and 24), usually on a part-time basis (60.2%), and many while they are studying (22.9% of all minimum wage workers are studying).

Figure 1: Comparison of minimum wage and other workers

12. This means that a high proportion of minimum wage workers are not permanently in this state. For the 60% of workers who are young and part-time, low paid work is often a stepping-stone to a higher wage job. This is especially clear for the one in five who are studying while working in minimum wage jobs.

…and the minimum wage is not well-targeted to support families with children.

13. The second graph shows how this changing mix has reduced the minimum wage's effectiveness as a tool to target additional income at families with children. For this, we have used some older analysis by Treasury of everyone (555,000 people) who earned between the then minimum wage and the Living Wage. While the breakdown of the type of family is from 2013, we do not expect the current breakdown will be significantly different now.

14. This breakdown found that about one in five minimum wage workers were from families with children, and it also found that almost 30% of these households also had another worker who was earning above the then living wage, meaning the minimum wage worker was supplementing a higher household income.

Figure 2: Type of family where adults earn below the Living Wage ($18.40), 2013
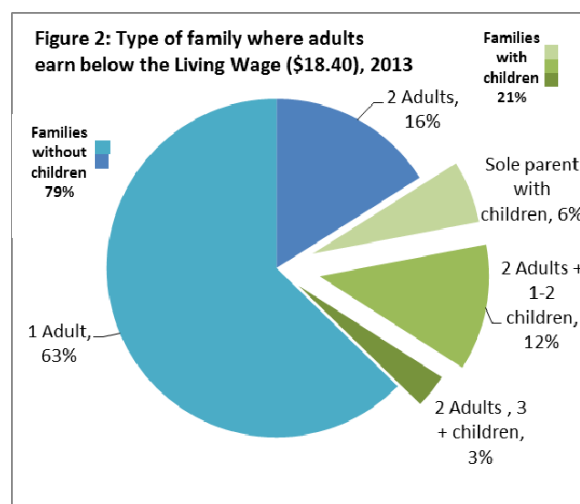
15. The Ministry of Social Development's research shows that over half of all households where children experience high levels of material deprivation have either no adult earning a wage or where the adult is moving between the work-force and benefit system, and for these families the benefit settings are more important for determining their incomes than the minimum wage.[3]

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[3]   Ministry of Social Development, Household Incomes in New Zealand: trends in indicators of inequality and hardship 1982 to 2016.

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16. The welfare system provides supplemental support targeted at families with children on the minimum wage, meaning that the effect of lifting the minimum wage on family income depends upon the interaction between welfare entitlement and earnings. In essence, those on the minimum wage without children keep all of the increased income other than their increased income tax, but those with children are impacted both by income tax and by the abatement of benefits.

Figure 3: Breakdown of income source
Solo parent in full-time minimum wage work, with two children under 13
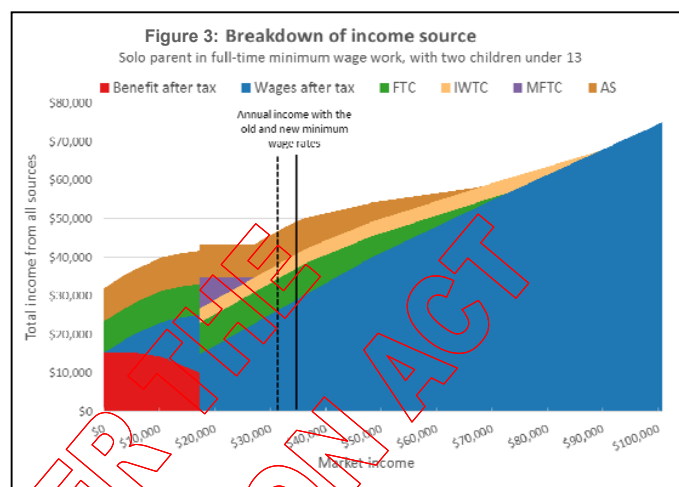
17. The impact of this on one family type (a sole parent working full-time on the minimum wage with two children[4]) is shown in the third graph. The change in the minimum wage would lift this family's work income from $31,200 to $34,320 as indicated by the lines on the graph, but at this income level, market income provides a little more than half of the total family income. The abatement of the welfare payments as incomes increase means that families with children receive a far lower income gain than the minimum wage increase itself.

18. The final graph shows the overall impact of all of these demographic changes. It has resulted in New Zealand having a much lower proportion of full-time workers on low wages than most other countries.[5] This is important because much of the research on the impact of the minimum wage on improving family incomes comes from countries that are different from us, such as the United States and the United Kingdom, and we cannot assume that policies that are successful in these countries will have the same success in New Zealand.

Figure 4: Percentage of *full-time* workers earning below 2/3rds of the median wage, 2014

The minimum wage as a lever to lift productivity

19. There is no consistent evidence that changing wage rates fundamentally alters the foundational conditions that drive prosperity or that minimum wages are a key determinant of different productivity levels between countries. Productivity is determined by many factors including the political institutions and social infrastructure, monetary and fiscal policy, and macro- and micro-economic conditions. These factors are much more significant than the minimum wage, because they drive the investment in technology, management capability, and workforce skills that enable a country to make the most of its comparative advantages.

20. Avenues through which research suggests minimum wage changes may have *marginal* productivity impacts include:

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[4] The graph assumes the family lives in area 2 for the accommodation supplement. It does not include the recent change such as the winter fuel supplement.

[5] Again, while the latest available data from the OECD is for 2014, we would not expect the results would be any different now.

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- By discouraging the growth of industries with a high proportion of low-skilled workers, it may change the mix of industries in the economy, moving it towards a higher skilled industrial structure. In New Zealand, minimum wage work has become concentrated in a few industries with only hospitality (17.8% of hours worked) administration services (16.9%) retail (13.7%), and agriculture (9.1%) having a high proportion of workers on the minimum wage, and so we do not think there is major additional gains from further changes in the industrial structure.

- By encouraging employers to increase labour productivity to protect their profitability the minimum wage may, in theory, encourage innovation and the adoption of new technology. In our view, the key to higher productivity in New Zealand is unlikely to be through focusing effort on lifting the productivity of the hospitality, administration and retail sectors.

- Through more effective resource utilisation, by increasing the incentives on people to participate in the labour market and increasing the incentives on employers to increase the skill level of workers to justify their higher wage rates. However, New Zealand already has a very high level of labour market participation compared to other countries and, as a result, there is probably little additional gain from further lifting minimum wages to encourage yet greater participation.

21. On the other hand, lifting the minimum wage has also been shown to encourage young people to leave education earlier than otherwise, reducing their skills and lowering their long term productivity and lifetime earnings. New Zealand already has relatively low youth participation in education and a relatively high rate of youth at work, and this may reflect our already high minimum wage. Given the importance of skill development, we provide some options that could be used to mitigate this negative outcome below.

The minimum wage as a lever to lift economic growth

22. Overseas, on rare occasions, the employment losses from lifting the minimum wage has been offset by employment gains from the increased consumer demand caused by minimum wage earners spending a high proportion of their earnings. However, for this to happen, the lift to consumer demand needs to be significant, the small number of people earning at or near the minimum wage makes this unlikely in New Zealand.

23. Overall, as figure 5 demonstrates, there is no strong relationship between the overall average incomes (as shown by GDP per capita) and the relative level of the minimum wage. Some countries, like Luxembourg, the Netherlands and Australia, have relatively high minimum wages compared to their average wage and high incomes and others, like Chile and Slovenia have high minimum wages but low incomes. This suggests the minimum wage is not an effective tool for lifting wage levels overall.

Figure 5: Comparison of minimum wage relative to mean wages
and GDP per capita among OECD countries, 2015
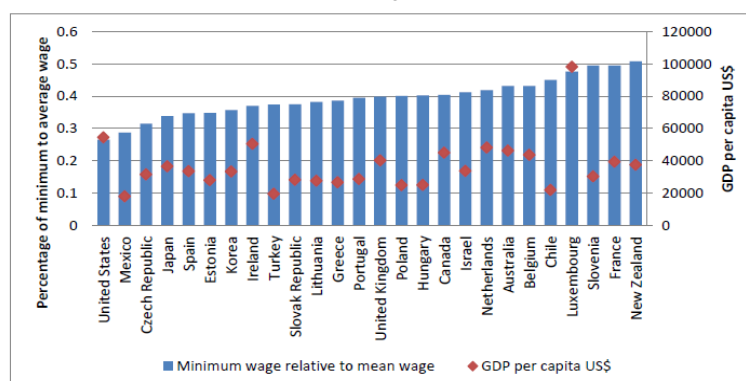
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24. The impact of a minimum wage change on firm profitability is higher when prices are set externally, such as in export industries. This is because there is less ability for employers to pass on costs. All else being equal, without offsetting changes in the exchange rate and productivity, an increase in the minimum wage that increased overall labour costs would reduce international competitiveness. In New Zealand, the industry that is most likely affected by this is agriculture, because not only is most of the output exported, but it also has a relatively high level of minimum wage work.

25. Finally, our minimum wage rate may also impact on the migration flows for low skill workers as our minimum wage rate draws closer to that in Australia. Our open labour market means the relative minimum wage rate (and associated conditions like access to welfare for New Zealand citizens) may determine the relative attractiveness of the two labour markets for low skilled workers. We are not able to be confident of the extent to which this would drive migration because New Zealand's minimum wage has not been near Australia's for many years. (The current Australian minimum wage rate is $A18.29 per hour or $NZ20.27 at current exchange rates).

Economic Conditions Determine the Employment Impacts

26. New Zealand's own experience, and also experience overseas, highlights the key considerations that we think should inform the Government's approach to increasing the minimum wage, to ensure that the changes provide the maximum support for the Government's income and productivity objectives, while mitigating the unintended consequences of an increase.

A minimum wage increase is unlikely to impact employment in a tight labour market …

27. The impact on employment of lifting the minimum wage depends on the extent to which it lifts wages above the level they would have been. Economists describe this as the "bite" and empirical research, both in New Zealand and overseas, shows that the "bite is greater when the minimum wage is closer to the median wage and labour demand is weak, and labour market regulatory settings make employers hesitant to take on additional labour. In New Zealand the effect of lifting the minimum wage was lower when the labour market was buoyant in the early 2000s than it became over the Global Financial Crisis when employment conditions deteriorated.

28. In New Zealand the "bite" is likely to be high because our minimum wage is already one of the highest in the OECD compared to the median wage. Our forecast is that the increase to $20 will cement our position as the country with the highest ratio of the minimum to median wage (after allowing for forecast median wage increases). This means that lifting a minimum wage is less likely to have major impacts on employment when the labour market is tight, but there is likely to be a higher unemployment when labour market demand is weak.

Figure 6: Minimum wages as a percentage of median wages, 2016
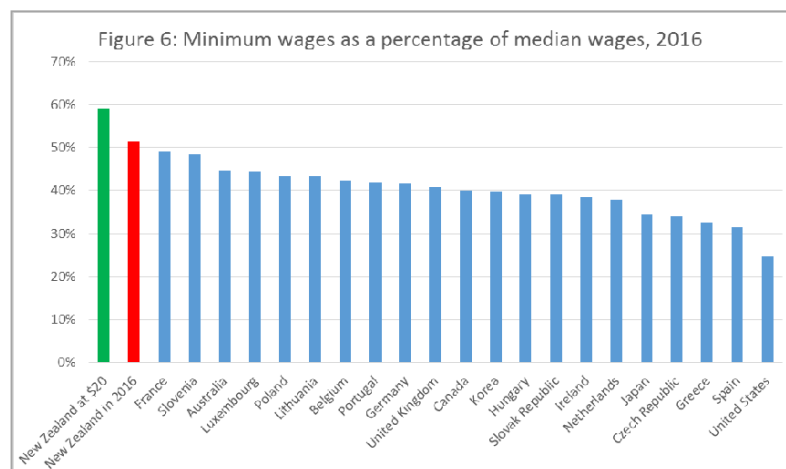
…but it is likely to "bite" when the labour market is depressed.

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29.   In downturns (including the Global Financial Crisis), employers are often reluctant to make existing employees redundant or to reduce their wage rates, but they lower their labour costs by not hiring, reducing work hours, or hiring new staff on lower wages. This concentrates the minimum wage impact on the groups entering the labour force, like young workers, and those with low skills. The higher proportion of young people on the minimum wage in New Zealand will exacerbate this effect and magnify its impact on youth employment.

30.   The average difference across many studies in the employment impact on young people between a bouyant and depressed labour market is summarised in Figure 7. Young workers with low skills (as shown by no high school diploma) are particularly hard hit, and this could impact on those ethnic groups with many young people with low qualifications like Māori and Pacific. Even now, with a buoyant labour market, unemployment is significantly higher among young people. While currently the overall unemployment rate is 4.6 per cent, those aged 15-19 have an unemployment rate of 19.8 per cent and those aged 20-24, 8.9 per cent.

Figure 7

Estimated effect of a 10% increase in minimum wage on low-skilled employment

Note: HS = high school diploma.
Source: [1]

Source: J Sabia (2015) Do minimum wages stimulate productivity and growth? IZA World of Labor

31.   The impact of the minimum wage on slow growth regions is similar to when the economy is depressed. Their wage rates tend to be lower both because there is a shortage of jobs and because the cost of living is lower. This means a nationally set minimum wage is likely to be an even higher proportion of regional wages, and so will have more "bite". Again the impact is usually concentrated on young, unskilled workers, and it may be one reason why the rate of NEETs (those under 24 who are not in employment, education or training) is higher in these areas.
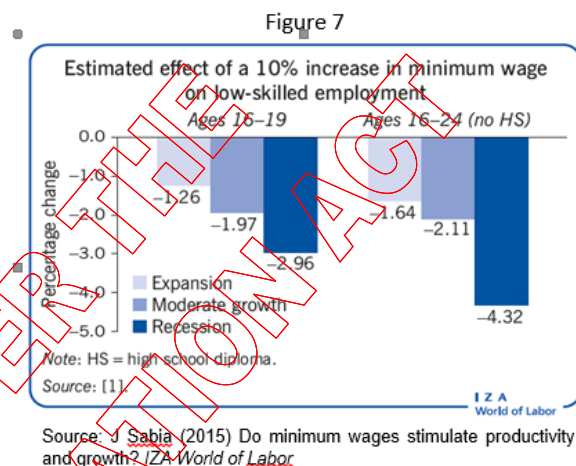
Options for Minimising Unintended Impacts

32.   Research on the minimum wage has suggested a number of policy options that would minimise the negative impacts on employment. We suggest that the Government actively consider these as it makes its decisions.

Consider the economic cycle and labour market indicators before setting increases

33.   The most important suggestion is that the level of the increase in any year should be determined by the economic cycle and the state of the labour market. When the labour market is strong, the increase could be larger, and when it is weak, it should be as small as possible. We recommend that:

- you maintain the messaging about the rise in each year being consistent with economic conditions that prevail at that time, and that you do not provide any more specificity about future increases than the general indication of $20 by 2021 at this point.

- the state of the economy and job market be assessed as part of each review. MBIE is responsible for this area, but we would be looking for indicators such as: increasing unemployment (particularly youth unemployment). We would be looking for early indicators of declining jobs openings e.g., a drop in jobs listings

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on Trademe and a significant slowdown in economic growth rates in our major export markets.

Subject to the business cycle, seek to make minimum wage increases small and annual

34. Negative employment impacts are likely to be limited if minimum wage increases are small and frequent, and these are therefore preferable to less frequent, large ones. New Zealand's experience of annual minimum wage increases broadly confirms this. It has had gradual but continuous increases in the minimum wage since 2001. This has resulted in the minimum wage moving faster than either average wages (as shown by the labour cost index) or inflation, but has maintained high labour force participation and relatively low unemployment.

Consider options to mitigate the impacts, particularly on young people

35. Policies to mitigate negative employment impacts on youth and low skilled workers could also be considered. s9(2)(f)(iv)

The fees-free tertiary policy will likely have positive effects of this nature. Further mitigation options include:

- **Maintaining the starting-out rate**, as it provides a safety value in weak economic conditions. We are aware that the starting-out rate is currently not widely used by employers (so currently the consequences on young people of keeping it are low) but it provides a safety-valve of enabling increasing use in an economic downturn.

- s9(2)(f)(iv)

- **Considering options that encourage industries that intensively use low-skilled workers to support worker upskilling**. New Zealand already has a very high level of in-work training but, as in most countries, higher skilled workers tend to get more training than the unskilled. s9(2)(f)(iv)

- **Considering options for addressing the impact on regions** as part of your focus on regional growth. Currently the main interventions to address this involve the interface with welfare, such as active MSD case management, pastoral care, and job matching.

- **Considering options for mitigating the impact on small businesses.** The Tax Working Group will consider whether a lower company tax rate for small businesses would improve the tax system and business environment. The Working Group is expected to report back on this, but we note that small businesses usually distribute profits to their owners by shareholder salaries or dividends. Both of these would claw back the benefit of a lower company tax rate and tax the income at the owner's rate. Higher labour costs will also reduce tax liabilities.

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Next Steps

36. As indicated, the proposed $16.50 minimum wage will increase the incomes of 161,400 workers and is without a significant impact on employment or the economy given the current tight labour market. You may wish to ensure the messaging about the increase continues to indicate your goal, but also that it will be achieved as economic conditions allow.

37. You may wish to seek further advice from the Minister for Workplace Relations and Safety and Minister of Employment on how the economic conditions will be monitored for the subsequent increases, as each of these will increase the "bite" of the minimum wage and so the risk of higher unemployment especially of youth and unskilled labour.

38. You may also want to consider the role of the starting-out rate as a safety valve for protecting young workers from unemployment in a downturn, and also whether other mitigating policies should be considered further.

39. Should you wish, The Treasury is available to discuss this report further with you. We will also be engaging with MBIE on their work programme on the minimum wage increases.

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